

The SHIPPING WORLD



VOL. 144 No. 3542

28 JUNE 1961

Price 2s.

ODENSE and LINDØ shipyards

TOTALLING
3 BUILDING BERTHS
1 OUTFITTING QUAY
2 BUILDING DOCKS
1 OUTFITTING DOCK

Newbuildings
up to 100,000 t. d. w.



Odense Steel Shipyard Ltd.

Odense • Denmark

ADDRESS: P. O. BOX 176, ODENSE, DENMARK
TELEPHONE: ODENSE 11 31 31. TELEX: 9849
TELEGRAMS: STAALVERFT ODENSE
Copenhagen Office: B, Kongens Nytorv, Copenhagen K

HELLENIC SHIPYARDS

PIRAEUS (Skaramanga)

- ★ MACHINERY AND HULL REPAIRS : SURVEYS
CONVERSIONS : DRY-DOCKING
- ★ CONSTRUCTION OF ALL TYPES OF VESSELS
UP TO 650 FT. IN LENGTH AND 32,000 D.W.T.
- ★ FLOATING DRY-DOCKS

No. 1. Length 694 ft. Breadth inside walls 121 ft. Lifting Capacity 26,000 tons. Docking Vessels up to 50,000 D.W.T.

No. 2. Length 673 ft. Breadth inside walls 104 ft. Lifting Capacity 22,000 tons. Docking Vessels up to 40,000 D.W.T.



Launching of WORLD HOPE (24,700 d.w.t.), first tanker built by Hellenic Shipyards at Skaramanga.

Conveniently situated on the main shipping lanes through the Mediterranean. Fully equipped with the most modern installations for all types of shipbuilding and ship-repair work.

Registered Office: **HELLENIC SHIPYARDS CO. LTD.**

4, Acadimias Street, Athens, Greece

Cables: SHIPYARD ATHENS

Telex: ATHENS 123

Telephone: ATHENS 611-141

YARD: Skaramanga, Eleusis Bay, Near Piraeus, Greece

Telex: ATHENS 96

Telephone: ATHENS 073-471 (9 lines), 073-351 (10 lines)

U.K. Agents: HELLENIC SHIPYARDS (LONDON) LTD., 41/43 PARK STREET, LONDON, W.1

Cables: SHIPNIAR LONDON

Telex: LONDON 28561/2

Telephone: MAYfair 8400

U.S. Agents: TRANSOCEANIC MARINE INC., 39 EAST 51st STREET, NEW YORK 22, N.Y.

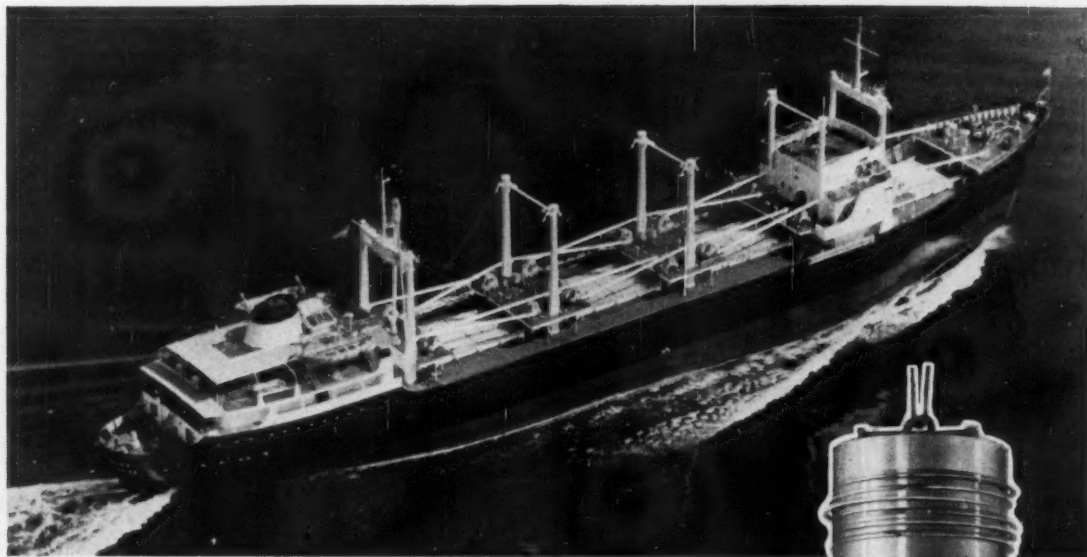
Cables: TROCEANIC NEW YORK

Telex: NEWYORK 4042

Telephone: MUrray Hill 8-7070

MADE BY VALMET

means quality in five continents



Valmet ship delivery to Brazil

The building of the four freighters of 6,300/8,100 tons d.w. ordered by the Brazilian merchant marine commission from Valmet Oy has now been completed. On April 28, 1961 the fourth ship, the Paranguá, was delivered to the owners.

B&W

Burmeister & Wain
marine diesel engines manufactured on license in Finland by Valmet Oy

The main engine in the freighters built for the Brazilian merchant marine commission is a Burmeister & Wain—type 850-VTBF-110 engine manufactured at the Valmet Oy Rautpohja works. The greatest continuous capacity of the engine is 4,600 h.p./170 r./min.

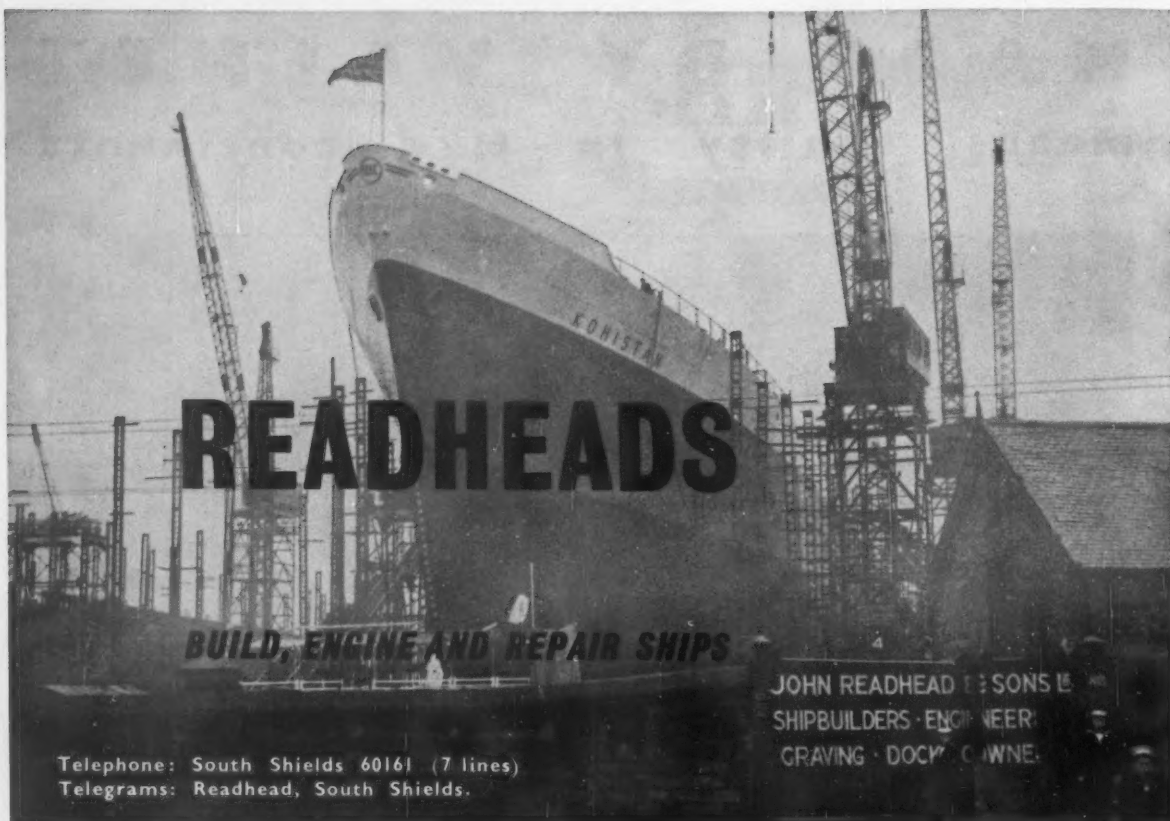
Valmet Oy also manufactures auxiliary diesel engines and marine diesel engines for small vessels.

**We build — we repair —
we dock**

Valmet Oy
Helsinki
Telex:
Helsinki 12-427



The mounting phase of the piston and the piston rod in a marine diesel engine



READHEADS

BUILD, ENGINE AND REPAIR SHIPS

JOHN READHEAD & SONS LTD
SHIPBUILDERS · ENGINEERS
GRAVING · DOCKING · PAINTING

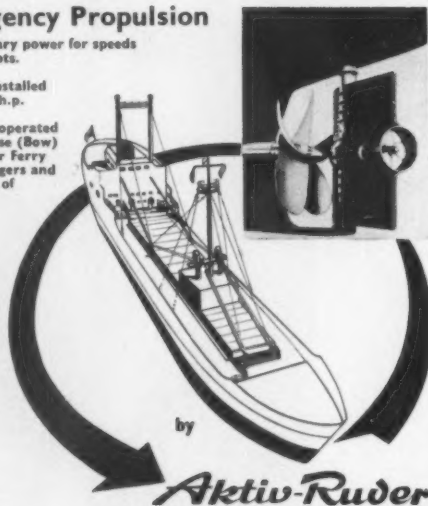
Telephone: South Shields 60161 (7 lines)
Telegrams: Readhead, South Shields.

Improved Manoeuvrability
Full Utilisation of Rudder
Greater Safety
Emergency Propulsion

using auxiliary power for speeds
of 4 to 5 knots.

Capacities installed
35 to 1,000 h.p.

Can also be operated
as Transverse (Bow)
Propeller for Ferry
Boats, Dredgers and
other types of
Vessel.



Sole Manufacturer:

PLEUGER UNTERWASSERPUMPEN GMBH
HAMBURG-WANDSBEK

Phone: 61 12 61 · Cables: PLEUGERPUMPE
Telex: 02 13274

Codes
Bentley's
2nd Phrase
ABC Telegraphic
7th Ed.
New Box
with "Q" List



Telegrams:
Phrontis

The French Somaliland Shipping Co. Ltd.

(S.A.R.L. au Capital de francs Djibouti 5.000.000)

Steamship Agents
Shipping, Passage, Transit, Insurance

Agents for:

Deutsche Afrika-Linien
Norddeutscher Lloyd
Hamburg-Amerika Linie
Companhia Nacional de Navegacao
The Hellenic Mediterranean Lines Co. Ltd.
Orient Mid-East Lines
India Steamship Company Limited
Soc. Generale de Navigation Maritime, S.A.E
Claymore Shipping Co. Ltd.
Baloise Marine Insurance Co. Ltd.
The British & Foreign Marine Insurance Co. Ltd.

Offices at:

Addis Ababa (Ethiopia) P.O. B. 312 - Tel. 23 11 1885
Aden (Camp) P.O. B. 33 - Tel. 4344
Asmara P.O. B. 1115 - Tel. 848
Assab P.O. B. 52 - Tel. 8
Djibouti (C.F.S.) P.O. B. 15 - Tel. 244, 464
Massawa P.O. B. 6 - Tel. 187

THE SHIP IN ART

Bacino di San Marco

CAVALETTO 1697-1768

The possessor of a name which meant 'canal', Canaletto was one of the two most famous of all Venetian painters of the canals and water pageantry of his native city. He spent most of his life in Venice, yet his greatest success lay in England, which he visited frequently, and the best collection of his work is at Windsor Castle.

Venice, in Canaletto's day, was one of the richest trading ports in the world, used by ships of all nations, like the Dutch and English merchantmen in the picture. The Basin of Saint Mark, then the largest deep water harbour in Venice, has changed little in appearance, save that modern vessels have replaced the great sailing ships and galleys which once rode at anchor there.



Reproduced by permission of the Trustees of the Wallace Collection.



GENERAL BUNKER SALES AGENTS TO
BP TRADING LIMITED



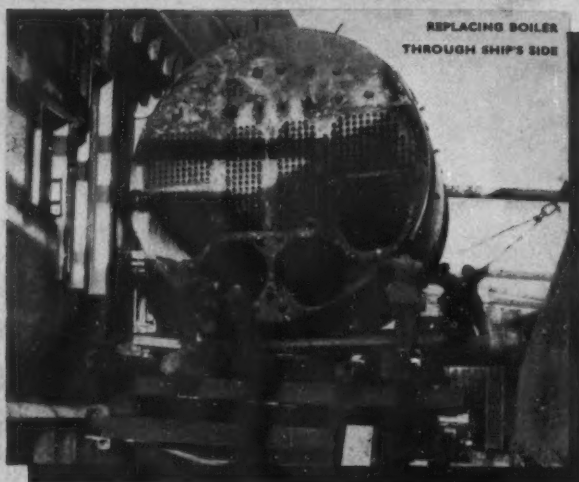
WM. CORY & SON LIMITED · CORY BUILDINGS · FENCHURCH STREET · LONDON E.C.3
TELEX 29225

MOUNTSTUART

**NINE DRY
DOCKS FOR
SHIPS UP TO
74'0" BEAM**

CARDIFF · BARRY · NEWPORT · AVONMOUTH

ALL CLASSES OF HULL, ENGINE AND BOILER
REPAIRS TO ALL CLASSES OF SHIPS
TANK CLEANING INSTALLATION
AT ROATH DOCK, CARDIFF



MOUNTSTUART DRY DOCKS LIMITED

Head Office CARDIFF

TELEPHONE: CARDIFF 29344
TELEGRAMS: MOUNTSTUART CARDIFF

SPROSTONS, LIMITED

3-9 Lombard Str., GEORGETOWN, British Guiana
Cables: Sprostons Georgetown (B. G.)
Branch Office: Port-of-Spain, Trinidad
Subsidiary Company: Sprostons (Jamaica) Ltd., Kingston, Jamaica

SHIPPING & AIRLINE AGENTS WHARF OWNERS AND STEVEDORES

Agents for: Saguenay Shipping Ltd., Montreal
Sales Agents for: British Overseas Airways Corporation
British West Indian Airways
Trans Canada Airlines
Varig Airlines

Members of International Air Travel Association

**SHIPOWNERS'
PROTECTION AND INDEMNITY
FREIGHT · DEMURRAGE AND DEFENCE**
covered by

THE LONDON

Steam-Ship Owners' Mutual Insurance Association Ltd
ESTABLISHED 1866

For particulars apply to the Managers

A. BILBROUGH & CO., LTD.

Walsingham House,
SEETHING LANE, LONDON, E.C.3

Telegrams: Bilbrough London

Telephone: Royal 4971

NEW BUILDINGS : of all kinds of vessels
REPAIRINGS : on all kinds of ships
JUMBOIZINGS : T-2 Tankers into 21,000/24,000 tonners etc.
ELONGATION : Liberty ships to be lengthened by 70 ft. etc.

Through our expert service most competitive offers may be obtained from local builders on any jobs

HAMASAKI & CO. LTD.

28, I-Chome, Hiranomachi, Higashiku, Osaka, JAPAN

Cable: "HAMASAKICO OSAKA"

Code: NewBoe

JAPAN



DECCA S-BAND RADAR

the most advanced 10 cm. marine radar in the world



Decca, renowned throughout the world for the quality and reliability of their 3 cm. marine radar are now supplying a new and outstanding S-band radar.

T.M.-S 2400, first in the new series is true motion equipment which embodies ten features unique to S-band radar.

- 1 High data rate—20 r.p.m. aerial rotation.
- 2 16 in. master display with integral true motion.
- 3 Rapid range and bearing measurement by Interscan.
- 4 Daylight viewing of P.P.I.
- 5 60 mile range scale.
- 6 Range and bearing markers to 60 miles.
- 7 5 P.P.I. presentations.
- 8 Performance Monitors.
- 9 High power 75 kW. transceiver.
- 10 Variable differentiation (S.T.C.).

DECCA RADAR

DECCA RADAR LIMITED LONDON ENGLAND

UNION-CASTLE

* Weekly service by express mailships

*The
quick
seaway
to
South
Africa*



**SAILING FROM
SOUTHAMPTON for
SOUTH AFRICA EVERY
THURSDAY AFTERNOON**
with passengers
and freight

**SAILING FROM
CAPE TOWN for
ENGLAND EVERY
FRIDAY AFTERNOON**
with passengers
and freight



* Also REGULAR PASSENGER & CARGO SERVICES from
London and Continental Ports to South and East Africa.
Speed your shipments and travel luxuriously by UNION-CASTLE.

Head Office and City Passenger Office:

CAYZER HOUSE · 2-4 ST. MARY AXE · LONDON EC3 · Tel: AVE 2010

Freight Dept: Greenly House · 30 Creechurch Lane · London EC3 · Tel: MAN 2550
Offices at Southampton · Birmingham · Leeds · Manchester · Sheffield · Glasgow

WILLIAM MORIER & Co. Ltd.
COPLAND ROAD, GLASGOW, S.W.1
SINCE 1836



**PAINTING BRUSHES and
GENERAL BRUSHWARE**
Specialising in Shipbuilders' Requirements

PORT EVERGLADES TERMINAL COMPANY, INC.
Affiliate: Eller & Company, Inc.

Ship Agents — Stevedores

Southeast Florida Ports
Port Everglades, Miami, Palm Beach and
Canaveral

Cables: 'Poterm' or 'Ellerco'

Address:
Port Everglades Station, Fort Lauderdale, Florida, U.S.A.

LAVINO SHIPPING COMPANY

Three Penn Center Plaza, PHILADELPHIA 2, Pa., U.S.A.

Cable Address: "LAVSHIP"

STEAMSHIP AGENTS

CHARTERING BROKERS

OPERATING MANAGERS

STEVEDORES { PHILA
H. ROADS
BALTIMORE

Branch Wainwright Building
Offices: Norfolk I, Va.

C & O Terminal Building
Newport News, Va.

1 Gateway Center
Pittsburgh 22, Pa.

Lavship of Baltimore Inc.
Court Square Building
Baltimore 2, Maryland

European Correspondents: G. T. SYMONS & Co., Ltd., 6, Lloyds Avenue, London, E.C.3. Cable Address: "TRADUCTIO"



T.S.S. 'PRINCIPE PERFEITO'

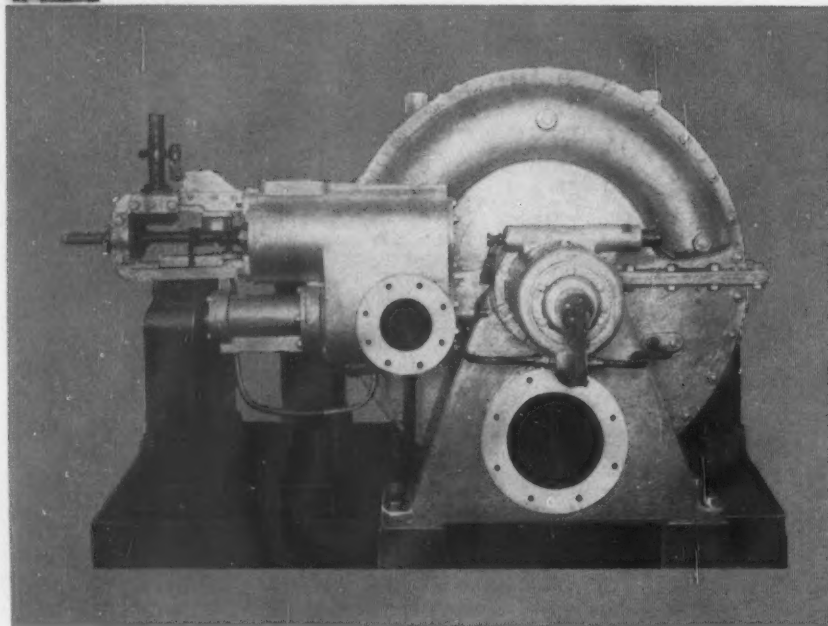
BUILT BY

Swan, Hunter & Wigham Richardson, Ltd.,

WALLSEND-ON-TYNE & NEWCASTLE UPON TYNE



this new *Clarke Chapman*
reversing steam turbine . .



. . is designed
as a prime
mover for
deck
auxiliaries and
side thrust
propellers

WORLD PATENTS PENDING

350 h.p. horizontal reversing turbine supplied to a 65,000 ton tanker for driving the anchor handling gear.

Note these

salient

features

- Totally enclosed watertight driving unit - low maintenance.
- Will accept high pressure and high temperature steam direct from the boiler.
- Infinitely variable speed control.
- Self-draining. Will accept primary rush of water.
- Condensate return free from oil.
- Smooth torque throughout speed range.
- Silent in operation.
- Rapid acceleration.
- Rapid reversal of direction.
- Self-contained steam released brake can be incorporated where necessary.
- Range of sizes from 30 to 1,000 H.P. with steam pressure from 70 to 450 p.s.i.g. and maximum temperature 600°F.

ORDERS COMPLETED and in hand for turbine driven deck auxiliaries for tankers of 25,000 to 84,000 tons built or building for Shell, Esso, P&O-Orient Lines, Caltex, BP, British India Steam Navigation and other tanker owners.

CLARKE, CHAPMAN & CO. LTD.
VICTORIA WORKS, GATESHEAD 8, CO. DURHAM

LONDON OFFICE: Dunster House, Mark Lane, E.C.3.

'Phone: MINcing Lane 8345/6/7. 'Grams: "Cyclops," Easphone, London.

GLASGOW OFFICE: 116 Hope Street, C.2.

'Phone: CENTral 1173/4.

'Grams: "Ardoch" Glasgow.

The SHIPPING WORLD AND WORLD SHIPBUILDING

The Oldest Weekly Journal devoted to Shipping, Shipbuilding,
Marine Engineering, Shiprepairing, Aviation and Finance

FOUNDED



1883

Chairman of The Shipping World Ltd: F. D. H. BREMNER

Editor: PETER DUFF

Associate Editor: IAN BREMNER

Advertisement Manager: W. MURRAY

Annual Subscription £5

Offices: 127 Cheapside, London EC2

Telephone: Monarch 2801

Telegrams: Shipping World, London

Vol. 144

28 JUNE 1961

No. 3542

| | | | |
|---------------------------------------|-----|---|---------|
| A Monopoly Broken | 559 | Scandinavian Shipping and Shipbuilding | 567-582 |
| Current Events | 559 | New MacGregor Hatch Cover | 583 |
| On the "Baltic" | 562 | "Squareline" Braided Rope | 585 |
| Reconstruction of Lithgow Yard | 563 | New Anti-Corrosion Primer | 585 |
| Oil Topics | 566 | New Contracts, Launches, Trial Trips | 586 |
| Recent Ship Sales | 566 | Maritime News in Brief | 587 |

BY APPOINTMENT
ELECTRICAL



TO THE LATE KING GEORGE V
ENGINEERS

TELFORD GRIER MACKAY & Co. Ltd.

MANUFACTURING & CONTRACTING ELECTRICAL ENGINEERS

FLOODLIGHTS
SWITCHBOARDS
FITTINGS



SEARCHLIGHTS
NAVIGATION
LANTERNS
DISTRIBUTION
PANELS

500 Watt. Mastmounting Floodlight.

11 FAIRLEY STREET

: :

GLASGOW S.W.1

Telegrams: TRIPHASE GLASGOW

Telephone: IBROX 2371

There's nothing keener than a home-grown crew



The coaster business is still largely a family affair. When they need an apprentice engineer, or a second cook, or a wireless operator, they just promote one of the family.

Carrying grain from the Continent, timber from the Baltic, fertilizer from the U.K., the ubiquitous coaster is hard at work as far afield as the Great Lakes or South America. But wherever they are,

the Smids, van der Molens and Meyers meet briefly at the Shell depot for a chat and a top-up of gas-oil.

Luckily there are hundreds of these depots about. On British, French, German and Dutch quays, and on hundreds of others all over the world. We do our bit for the great family of coasters by maintaining supplies in just about every port you can find on an Admiralty map.

YOU CAN BE SURE OF





THE SHIPPING WORLD

A MONOPOLY BROKEN

AFTER the welter of publicity about the Q3 project came last week's announcement that Cunard-Eagle Airways had received approval from the Air Transport Licensing Board to operate a North Atlantic passenger service. Though the approval did not go quite as far as the independent airline had hoped—no rights were given for services to Canada or the United States mid-west—there can be little doubt that the Board's decision will give the utmost satisfaction not only to Cunard-Eagle, but also to the whole of the privately-owned section of the British air transport industry. The ice has been broken; an independent airline has received permission to operate over a "prime traffic" route. The approval is for 15 years from August 1 next, but Cunard-Eagle will not, in fact, start the service until May next year. By then they will have taken delivery of their two Boeing 707 jet airliners, and so will be able to offer a service comparable both in speed and standard of comfort to the long-established Government-sponsored airlines.

The independent airlines have hitherto established a reputation for themselves—a reputation which, incidentally, is not fully justified—of providing cheap services run on a shoestring. But there will be nothing of that type about the Cunard-Eagle flights. Fares charged will be at standard IATA rates, and the seating in the aircraft, both for first-class and economy-class passengers, will be the same as that offered by other airlines. There is, however, one big "if" hanging over the A.T.L.B.'s approval. BOAC has announced its intention to appeal against the decision and it will now be up to the Minister of Aviation to decide finally whether or not Cunard-Eagle Airways are to be allowed to fly a regular daily service between London and New York. Even after this hurdle is over,

Cunard-Eagle may expect heavy opposition from the two American airlines when the application goes before the U.S. Civil Aeronautics Board.

It has been the oft-repeated pledge of this Government that the independent airlines should be given greater opportunities for expansion. It is difficult to see how Mr Thorneycroft could reverse the decision of the Board without cutting the very foundations away from that organisation and, at the same time, breaking the Government's pledge. BOAC is objecting on the grounds of "material diversion of traffic." It is understandable that the Corporation should not take kindly to this decision, which will break the monopoly that it has held for so long, but others will undoubtedly retort "live and let live." Atlantic air travel has been growing apace ever since the end of the war. At the moment there is something of a depression, with traffic below expectations, but nevertheless increases of the order of 10 per cent are being achieved. There have been these temporary setbacks in the past, but generally the airlines have maintained an annual 15 per cent growth of business. In the last four years the numbers crossing the Atlantic by air have, in fact, nearly doubled. Of course there may be some diversion of traffic from BOAC, and from its foreign competitors, but proportionately it will be small. The Corporation is at present operating 70 transatlantic services a week; Cunard-Eagle has been given permission to operate a maximum of only one a day in each direction. If the introduction of larger and faster aircraft, with cheaper fares, results in the increase in North Atlantic passenger traffic which is expected, BOAC's traffic should continue to increase, and the participation of Cunard-Eagle Airways should help to increase the British-flag share of the total traffic.

Current Events

No Mystery

WHAT has been described as "the mysterious disappearance of part of Britain's invisible earnings from British shipping" is no mystery to British shipowners, or to other readers of this journal. Repeated representations on the highest levels for the Government to take action to put the shipping industry on the same footing as its tax-free flag-of-convenience competitors have fallen on the cloth ears of the Treasury, to whom it should have been as obvious as the nose on their faces that the decline of Britain's share of world shipping must inevitably result in a decline of the country's invisible earnings from ship-

ping, accelerated as it has been by the still growing menace of flag discrimination in its manifold forms, and the reservation of cargoes to national flags. The annual report of the Merchant Navy & Airline Officers' Association for its silver jubilee year puts the matter concisely: "Britain's prosperity, and her ability to maintain so many people at a reasonable standard of living in such a small country with comparatively few natural resources, has been, and still is, based on receiving income from other sources besides exports of manufactured goods—invisible exports such as banking, insurance, various other financial services, and last, but not least, earnings and savings

of foreign currency by shipping services. British shipping contributed £221 mn to the country's invisible exports total in 1952 but this declined to £135 mn in 1958 and £100 mn in 1959. Severe losses in shipping earnings, part of our invisible exports, can seriously affect our already difficult balance of payments problems and reduce the standard of life of the British people. If more people realised this more fully than they do at present then much more public interest would be shown in shipping and its problems."

Long-term Tanker Charters

THE 20-years time charters negotiated between Shell Tankers Ltd and the Anglo-American Shipping Co Ltd are of special interest in view of the present state of the tanker market. The vessels concerned are two 80,000-dwt newbuilding tankers, which will start trading in 1963 and in 1964. The time charters are each divided into four periods of five years on an ascending scale of rates. For the first period, it will be 12s 1d; the second at 12s 5d; the third at 13s 5½d and the last at 14s 1½d. The vessels, flying the British flag, will be built by Kieler Howaldts-werke in accordance with Shell specifications. They will have a speed of not less than 15½ knots and will be propelled by steam turbines. The Anglo-American Shipping Company is a member of the International Naess group, which states that it laid down a programme of building assessed on the immediate and anticipated long-term requirements of chartering organisations, "and at the time these particular contracts were placed, British yards were not in a position to meet our group's needs on the two vital points of cost and delivery. Consequently we had to place our contracts elsewhere." This announcement cannot fail to be regarded as of outstanding importance by tanker owners everywhere, as well as by the other major oil companies, especially as it is understood that Shell has simultaneously arranged to charter two similar-sized newbuilding vessels from another owner on terms which it is understood are roughly the same as those applying to the two Anglo-American ships. These may well be the two 80,000-dwt tankers ordered by Sig. Bergesen, Stavanger, from the Chantiers de l'Atlantique originally as 58,000-tonners. The two new Naess tankers will be managed by Naess Denholm & Co Ltd who, under authority from and in conjunction with Naess Shipping Company, Inc., New York, have been responsible for arranging the Shell business. The London brokers concerned were E. A. Gibson & Co Ltd.

The Plumbers' Stand

A PROPOSAL for wage increases of 2d per hour made by shipyards on the lower reaches of the Clyde to 1,000 plumbers employed by the yards has been rejected. Conditions applying to the proposed increase were similar to those which have been accepted by other trade unions, that there should be no further wage demands or strike action for two years. The employers' viewpoint is that stability in shipbuilding and ability to secure new business depends on continuity of working and reasonable stability of costs, and other unions have accepted that viewpoint; but the plumbers' organisers do not accept that there may not be reasons for further wage increases in the next two years, and have refused to accept the no-strike, no-increase plan. They have gone further in indicating that strike action may be taken if the situation indicates that this is necessary. The claim has now been referred to a full conference of employers and the union, the final stage of arbitration in the industry. In defence of the plan, it is believed that the agreements already concluded were a major factor in the award to Lithgows Ltd of the latest Norwegian oil tanker order.

Ancient —

ON SATURDAY the Danish paddle steamer *Hjejlen* celebrated her 100th birthday. Built by Baumgarten & Burmeister of Copenhagen—now Burmeister & Wain—in 1861, she carried King Frederik VIII on her trial trip, and she still runs today, although somewhat carefully as becomes a lady of her advanced years. When she first left the shipyard at Copenhagen she went aground and had to be towed upstream by twelve men and seven horses, and later on had to be dragged over the dam at Silkeborg. The propelling machinery, which amazingly enough is still in good working order after so many years, is, apart from the boiler and crankshaft, the same as that which was originally installed. The funnel has been moved further aft and a closed wheelhouse and covered after deck fitted. An additional "refinement" was the installation of an engineroom telegraph—before this was fitted, the captain used to shout out the engine orders to a boy standing on deck by the engineroom skylight, who in turn yelled down to the engineer below. The *Hjejlen* is 80ft in length with a maximum breadth of 12ft and 20ft over the paddlewheel casings. The paddles are 8ft in diameter. An oscillating steam engine developing 10 hp provides the power.

—and Modern

MR STAVROS NIARCHOS is adding to his yacht collection the fastest yacht in the world—indeed, the fastest non-naval, non-hydrofoil boat in the world. Aptly named *Mercury*, she has been built by Vosper Ltd of Portsmouth, and, like the Vosper "Brave" class patrol boat from which she springs, is powered by three Bristol Siddeley Proteus marine gas turbines, each developing 3,500 bhp. It was bad luck for all concerned that just before the "demonstration trials" last week one of the engines showed an unaccountable oil pressure fluctuation and was whipped out and sent back to the test bed for investigation, leaving *Mercury* in an undemonstrative state. With her three engines driving three high-speed propellers that cock a snook at the cavitation problem, the yacht is capable of exceeding 50 knots. She is not, of course, intended for cruising to the West Indies. The point of the speed is to provide quick communication for the owner and his guests between Athens and the private Niarchos island of Spetsaipoula, about 40 miles away. The main saloon provides luxurious accommodation for over 20 passengers, with semicircular steeply-sloping windows forward, stereophonic sound aft and above, and a spiral companion way down. The operational complement is eleven officers and men.

Cabin Accommodation

A POSSIBLE CALL for longer trips than the island shuttle service is answered by the provision of a double cabin and private bathroom, plus a single and a double cabin sharing a bathroom, all on a scale that can only be described as superb. The furnishing and interior decoration were carried out by the Schlichting-werft, Travemünde, to the design of Professor Pinnau, the same combination that was responsible for the interior of the famous *Creole*. The framing and bulkheads of the *Mercury* are of welded aluminium alloy, with double mahogany skin and wooden upperworks; the latter and the bottom up to the waterline are sheathed with fibre glass. The hull is of the planing, hard chine type, and it has a hydraulically operated transom flap. Reduction and reverse gearing are by W. H. Allen & Sons & Co Ltd and there are two Rover gas turbine generating sets of 40 kW. Radar, automatic pilot, air conditioning ("silent hours" included), two Albatross speed boats—that is the style of the yacht's equipment. It is probably true that the gas turbine machinery provides the most economical means

of achieving the speed requirement, but you can't get 50 knots out of nothing; the fuel consumption is believed to be something like 800 gallons of light diesel fuel per hour. There is no doubt that one way and another *Mercury* will add not only to the convenience and enjoyment of Mr Niarchos and his friends but also to marine knowledge.

Towing Contracts

AFTER a collision between a vessel and a tug which was towing another vessel, the tug owners adopted the passive rôle of referring all liability to the owners of the vessel in tow, on the assumption that under the towing contract the hiring vessel was liable for all damage howsoever arising while the tug was engaged in towing the vessel. There does, however, appear to be one important qualification—the result of the collision action between the tug and the colliding vessel. Once the responsibility for the collision is established, then comes the question of the responsibilities of the hirer under the indemnity clause in the towing contract. Until fault is established, it appears, even under the terms of the United Kingdom Towing Contract, that the tug should defend the collision action in the proper manner. This form of towing contract was, it is believed, originally drafted by one of the shipowners' associations and later approved by the Chamber of Shipping. It came into general use about 1933 and, while not all towing contractors use this form of agreement, similar terms are found in most of the forms used by towage undertakings all over the world. The almost unique feature of the contract is the indemnity clause under which the hirer agrees to assume liability for:

1. Damage of any description done by or to the tug;
2. Damage of any description done by or to the hirer's vessel;
3. Loss or damage to anything on board the hirer's vessel;
4. Loss of the tug or the hirer's vessel;
5. Any personal injury or loss of life; arising from any cause, including negligence of the tug owners, servant or agents, unseaworthiness, etc. The hirer shall pay for any loss or damage and personal injury or loss of life, and shall indemnify the tug owner against all consequences thereof.

Without question these contract terms impose very serious responsibilities on the hiring vessel and her owners. Looking back at the circumstances which surrounded their introduction and which resulted in these terms being adopted almost universally, one must wonder just how they could be an improvement on the terms available to shipowners previously.

Services to the Great Lakes

To the Editor of THE SHIPPING WORLD

SIR: We read with interest each and every issue of THE SHIPPING WORLD & WORLD SHIPBUILDING, and can truthfully say that the contents are always of wide interest and provide us with many benefits too numerous to elaborate upon herein.

In observing your May 10 issue, we studied with interest an article entitled "German Liner Services to Great Lakes" on page 430. This particular item indicated that the Michigan Ocean Line is "at present the only one maintained on this route after two competing liner services had to be suspended." We would respectfully draw to your attention that for several years, even prior to the opening of the St Lawrence Seaway, Saguenay Shipping Limited has operated a service between U.S. and Canadian Great Lakes to the Caribbean. Currently we are operating a fortnightly service between Detroit, Toledo, Cleveland, Toronto and Hamilton and Barbados, Trinidad and La Guaira, Puerto Cabello and Maracaibo in Venezuela. We also operate numerous other services to the Caribbean.

The foregoing is respectfully drawn to your attention so that the record may be set straight, and so that you may be aware that Saguenay has operated the service, without interruption, for many seasons. In closing we would take the opportunity to congratulate you on the manner in which your publication is set up both with regard to advertising and editorial material and you may rest assured that its contents are always closely studied by officials of our company.

Yours etc

S. C. CUMMINGS

Saguenay Shipping Ltd,
1060 University Street,
Montreal 3, P.Q.
16 June 1961.

Prominent against the evening light is a familiar feature of the River Tees, the transporter bridge at Middlesbrough



ON THE "BALTIC"

AN EASING IN THE PRESSURE OF DEMAND

By BALTRADER

ALTHOUGH it is a fact that so far as the freight markets are concerned most roads still lead East, in the past week or two there has been a definite easing in the pressure of demand in that direction and rates have suffered accordingly. Scrap chartering from the U.S. North of Hatteras and Gulf to Japan, for example, has been noticeably quieter after the unprecedented activity of recent months, and this fact alone is bound to have an effect on the outward markets, although this particular trade will no doubt continue on a smaller scale right through the year, just as it did in 1960. Coal chartering from Hampton Roads to Japan is another well-established feature of the markets throughout the year, but today it is probably easier to fix for September or October loading than for July because the American miners' holidays are next month and stems will be in short supply. Consequently it has become an annual market feature for charterers with July stems from Hampton Roads to indicate lower rates in the hope of catching a prompt ship whose owner has waited too long. With both scrap and coal from the U.S. Atlantic to Japan past their best, the most obvious alternatives to Japan are grain from the U.S. Gulf or sugar from Cuba, but in neither case is there active inquiry at present.

At the same time as the demand from the North American area to Japan has eased back, so also has there been a falling-off in the volume of inquiry from this side of the world to that equally important Eastern destination, China. In both May and the early part of this month there was a great deal of activity from Cuba to China, and this business attracted many ships both from European waters and in ballast from the Far East. Lately, however, having sharply reduced rates in their more recent fixtures, Chinese charterers appear to have withdrawn from Cuba altogether, and last week their only real interest seemed to be with phosphate from Casablanca to China, which they were covering at gradually reducing rates. Nevertheless, while it is disappointing for owners to see that some of the shine has gone from business out to the Far East, it is worth remembering that whereas last week scrap from the U.S. North of Hatteras to Japan was worth between \$140,000 and \$145,000 for a Liberty, and the rate for coal on normal terms from Hampton Roads to Japan stood at around \$10.50, the comparative figures a year before were approximately \$103,500 and \$8.35 respectively.

Low Grain Rates

Although the best is now over, the attraction of eastward rates in recent weeks must have been a big temptation to those owners who normally prefer to keep their ships in the trans-Atlantic grain trades throughout the year. Some, of course, did take the plunge, for the premiums paid for eastward business at the end of May must have provided ample compensation, however anxious one may have felt about the lack of return prospects; but for those who remained faithful to the North Atlantic run rewards have been meagre. Grain rates from the U.S. Gulf to the U.K., for example, have shown little variation since the beginning of the year when charterers were paying around 52s 6d. In February the rate rose to 58s and in late May a vessel secured 62s 6d, but today this same business is worth only about 55s. Rates from the St Lawrence to the U.K. have followed a similarly disappointing pattern and now it is doubtful if much improvement can be expected before the autumn. The uninspiring rates mentioned above are to the United Kingdom, where

tankers are not encouraged, but it goes without saying that in all the trans-Atlantic grain trades where tankers participate, rates have been so low that dry-cargo ships have been virtually cut out. Tankers have long monopolised the U.S. Gulf/Continent trade, but they regularly load grain from the Great Lakes and St Lawrence as well.

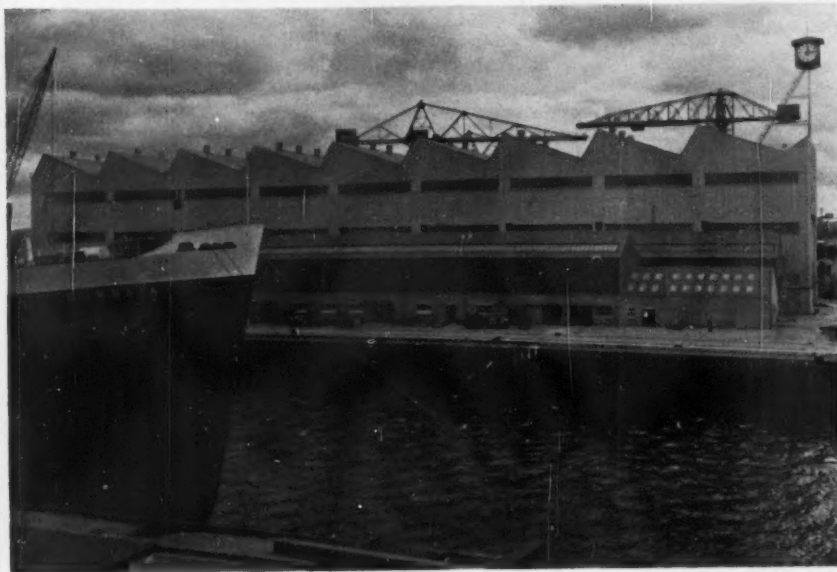
The Freight Markets

The freight markets were generally quiet last week and when business was arranged rates again tended to move in charterers' favour. In the trans-Atlantic trades the *Valetta* was fixed with wheat from Churchill to picked ports U.K. at 50s, August 1/11, and the *Napoli* takes heavy grain from Baie Comeau to picked ports U.K. at 44s 3d, July 8/17. Tonnage was fixed with wheat from the U.S. Gulf to Brazil at \$7.25 including *Doriefs*. June 24/30, and the *Corinth* was taken for heavy grain from the U.S. Gulf to Tokyo/Moji range at \$10.50 free discharge, July 24/August 5. There were a number of scrap fixtures from the East Coast of the United States to Japan for August and September loading and they included *Thalis*, 9,500 dwt, for cargo, 475,000 cu ft bale, from the U.S. North of Hatteras to Japan at \$135,000 f.i.o., August 20/September 5. Other scrap fixtures included *Fides*, a vessel of similar description, from the U.S. North of Hatteras to West Italy at \$72,000 f.i.o., July 24/August 10.

There were one or two fixtures arranged from the River Plate including *National Hope* with heavy grain from Up River, completing Buenos Aires, to Genoa, Leghorn or Naples at 68s 9d, option Up River competing *Bahia Blanca* at 2s 6d extra, limited clause 6, July 10/27. On the South African market fixtures included a *Lusi* vessel with iron ore from Durban to Moji at 54s 3d f.i.o., July 1/20, and there were also reports that a tanker had been fixed with maize from South Africa to Japan, a new development on this particular market. Tonnage was fixed with bulk sugar from Mauritius to London, Liverpool or Greenock at 65s gross discharge, option Antwerp, Rotterdam or Amsterdam at 6s less with free discharge, August 1/21.

On the Australian market several vessels were fixed with bulk wheat ex silo to India including *Amstelmolen* from Geelong to East Coast India at 52s free discharge, July 10/31, and the *Cape Clear* takes bulk sugar ex bags from Urgan to the U.K. at 107s 6d, option Antwerp, Rotterdam or Amsterdam discharge at 105s, August 25/September 25. On the North Pacific market the *La Estancia* was fixed with wheat from British Columbia to North China at the lower rate of 47s f.i.o., July 15/31.

In the Far East, a vessel with 492,000 cu ft bale available for cargo was fixed with copra from the Philippines to Antwerp/Hamburg range at 15½ cents per cu ft bale, option discharge in Scandinavia at \$2,500 extra, July 15/25. Fixtures from Mormugao included an August vessel with iron ore to Japan at 50s f.i.o., and the *Breim* with a similar cargo from the same loading place to Holland at 44s on gross terms. Timecharter fixtures included *King Aegeus* (ms), 12,250 dwt, 566,000 cu ft bale, 13 knots on 17 tons fuel oil plus 1 ton diesel oil, at 21s 6d per ton, delivery Amsterdam, 4/7 months trading, June 24/July 5. Also *Tabaristan*, 9,630 dwt, 516,000 cu ft bale, 11 knots on 30/32 tons fuel oil, at 19s per ton, delivery Lobito, redelivery U.K./Continent, trip via West Africa, July 14/21.



Reconstruction of Lithgow Yard

KINGSTON YARD IS
FORMALLY REOPENED

LEFT: The new fitting-out basin, with the pre-fabrication shop showing beyond the finishing trades' shops on the far side of the basin

THE REBUILT Kingston Yard of Lithgows Ltd at Port Glasgow, on the lower reaches of the Clyde, was the subject of comment in *THE SHIPPING WORLD* last week after its formal reopening by Mr Ernest Marples, Minister of Transport. The occasion permitted a visit to the yard, and this is an experience which can be recommended as a tonic to anyone concerned about the future of British shipbuilding. It is not, in fact, that there is anything there that could not be found on the Continent: it is just that here, in the heart of one of the great British shipbuilding districts, is a clean and modern shipyard with up-to-date equipment that any country would be proud to have.

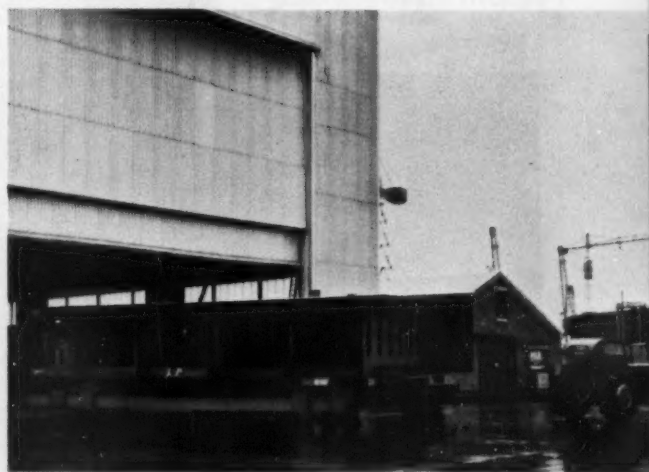
The Lithgow group embraces a wide range of firms—just how wide is not generally realised—but on the shipbuilding side it consists of Lithgows Ltd with two yards at Port Glasgow (the other being the East Yard); Wm. Hamilton & Co Ltd with a yard at Port Glasgow adjacent to the Lithgow East Yard; and the Fairfield Shipbuilding & Engineering Co Ltd at Govan, further up the Clyde. Fairfields typify the large British shipyard of the best kind, building high quality ships of every sort and also propelling machinery, both steam and diesel. The Lithgow and Hamilton yards, on the other hand, conform more to the modern trend towards specialisation: the Kingston Yard builds tankers, bulk carriers and cargo ships while the other two yards deal more with cargo liners. None of the three builds its own main engines, this being sub-contracted to specialised marine engineering firms, one of which—David Rowan & Co Ltd—is a member of the Lithgow group.

More specialisation and modernisation is on the way. At the opening, Sir William Lithgow announced that the yard of William Hamilton & Co Ltd is to be combined with the adjacent Lithgow East Yard into a single "super-efficient" yard for the production of cargo liners. In the process the name of William Hamilton & Co Ltd will vanish. Since then it has been announced that the Fairfield Shipbuilding & Engineering Co Ltd is to co-operate with David Rowan & Co Ltd on the marine engineering side. The two firms are to rationalise a number of their activities in order to improve their competitive position. Further details were not given, but it is reasonable to suppose that the Fairfield engineering side will concentrate on boilers and steam machinery, while

Rowans concentrates on diesel engines. As things are at present, both firms build both steam and diesel machinery; but Fairfield is particularly noted for its steam machinery, and in recent years has developed a reheating system with success.

The reconstruction of the Kingston Yard has taken four years, and has cost about £2½ mn, all of which has been found by the firm from its own resources. A certain amount of prefabrication was already in use before the present scheme was started as a small amount of modernisation was undertaken immediately after the war. However in a generation the yard's berthage has been changed from 13 small berths to three large ones, the largest of which will be able with a little further extension to accommodate tankers of 65,000 dwt. At present it can take ships of up to 750ft in length.

The berth cranes work on a principle exclusive to Lithgows. Instead of running along horizontal trackways on either side of the berths they run up and down the berth itself on toothed tracks, building the ships behind them. With this system there is not the same limi-



Sections are taken to the berth by tractor and bogie



Lockers, washplaces and showers in the canteen building

tation on the beam of vessels that can be built. On the other hand ships must be built from the stern towards the bow, though this is no particular disadvantage. The large berth has a 60-tons travelling crane, and this will in due course be augmented by another 60-tons crane, of hammerhead type, at the bottom of the berth. The two smaller berths have 25-tons travelling cranes which are scheduled to be replaced by cranes of 40-tons capacity.

The steel fabrication facilities are impressive. In the

stockyard plates are stored flat, and are handled by a Nielsen travelling gantry crane (illustrated on another page) with a lifting capacity of 15 tons. It has a magnetic pick-up employing 39 magnets, and similar Nielsen magnetic pick-ups are used inside the shops. They have proved themselves most effective for handling steel, although it is of course necessary to back up the electricity supply by a battery to avoid plates falling in the event of a power failure.

The platers' shop is impressively large, with ample space. Plates are shotblasted in a Tilghman's shotblasting machine with horizontal feed, installed inside the shop. Special primers are not used, as they have led to trouble with the welders and when plates are mangled. The mould loft has been retained—or rather a new one built—but profiling is carried out on a Messer Sicomat optical profiling machine which works direct from tenth-scale drawings. These drawings are supplied by loftsmen who have been specially trained in draughtsmanship, and are scanned by the control unit of the machine in a cubicle. Next to the cubicle is the machine itself, which can cut two pairs of handed plates simultaneously with its four burner heads. The machine is reported to cost about £21,000, but it has made an impressive contribution to the speed of plate working in the yard. Another is in use at Fairfields, and it is understood that several other British yards, on the Clyde and elsewhere, are interested in them.

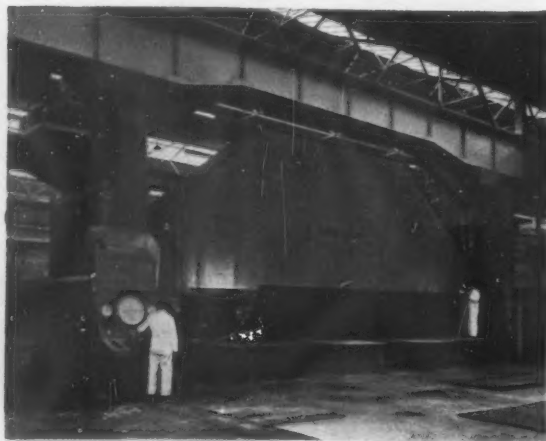
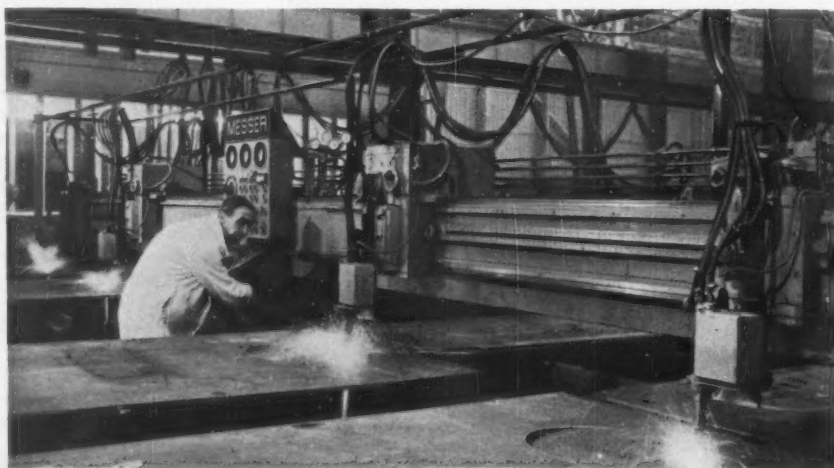
From the aspect of size, the most impressive machine

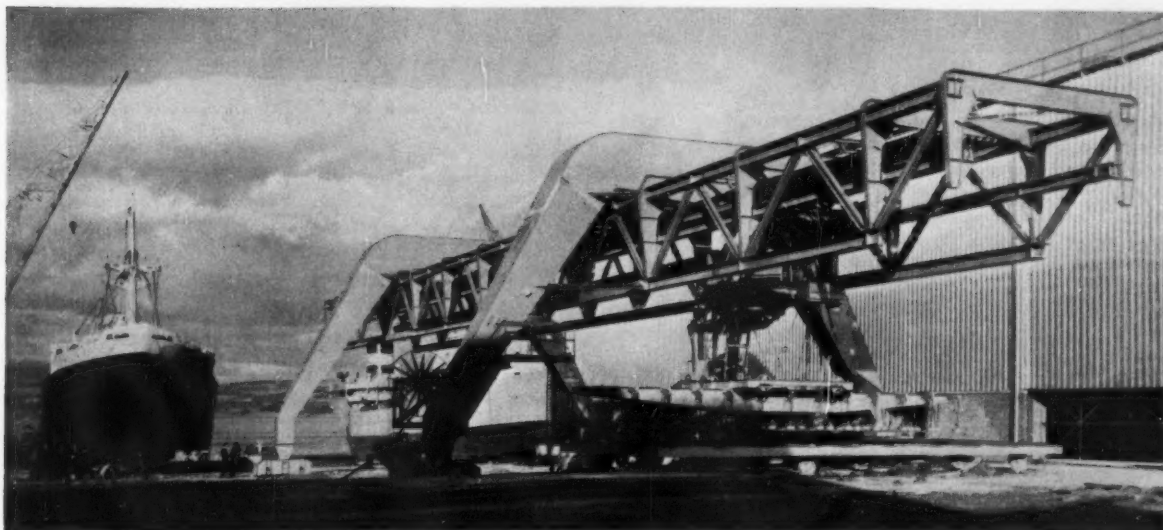
MACHINERY INSIDE THE PLATERS' SHOP

RIGHT: The Messer Sicomat profiling machine has four burners controlled by a photo-electric cell scanning a tenth-scale drawing

BELOW, LEFT: The Hugh Smith combined rolls and flanging press is the largest machine in the platers' shop

BELOW, RIGHT: Plates are shotblasted in a Tilghman's shot-blasting machine





Steel in the stockyard is handled by a Nielsen travelling gantry crane

in the platers' shop is the Hugh Smith combined rolls and flanging press. With a maximum pressure of 1,500 tons, this machine can accommodate plates 42ft 6in wide, and can roll plates 1½in thick and flange plates about 1in thick.

With a floor area of 46,000 sq ft and a height to the cranes of 67ft 6in, the new fabrication shed is capable of handling sections for the largest ships envisaged. It allows panels at least 50ft in length to be turned over for welding on the reverse side. A smaller fabrication shed, adjacent to the one described above, provides a floor area of 13,000 sq ft.

In the principal fabrication shed, cranes have been so arranged that the largest and smallest units can alike be handled with the minimum of waiting time. Four overhead travelling cranes—two of 40 tons and two of 10 tons—operate on two separate sets of rails. Three types of automatic welding machines are used for fabrication. These include a twin-arc fillet welding machine which moves at a speed of 26in per minute and welds stiffeners to plates on both sides simultaneously.

Another interesting machine used to speed fabrication is the Via-Vac vacuum clamping machine. Designed by Lithgows in conjunction with their associated company R. Y. Pickering & Co Ltd, it is marketed by the latter company.

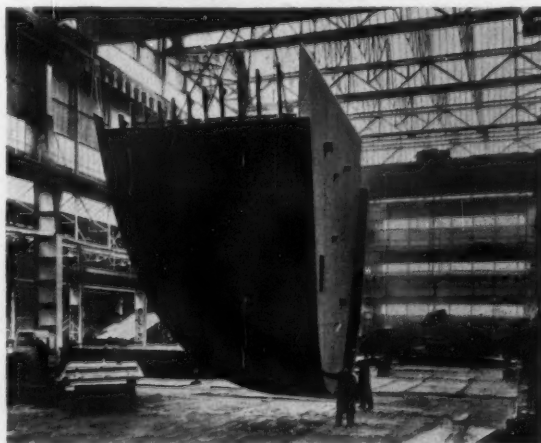
Although riveted construction is ever less in demand, some shipowners still ask for a certain amount of riveting in their ship's structure. For many years Lithgows have used hydraulic riveting for fabrication purposes, and the machines, working in the smaller of the fabrication sheds, operate at great speed.

A novel example of riveted construction can be seen on one of the berths. This is a bulk carrier of about 22,000 dwt for the Currie Line, which to meet the owners' requirements has all strakes on the shell plating riveted, though butts are welded. As the framing is longitudinal and welded to the plating, the resulting construction is most unusual. This vessel, incidentally, is to have the first B & W poppet valve engine to be built by John G. Kincaid & Co Ltd. A more advanced example of Lithgows' work can be seen in the fitting-out basin, where there is lying the bulk carrier *Mylla*, building for the Norwegian owners Simonsen & Astrup. This vessel is also of about 22,000 dwt, and is the largest ship yet launched by Lithgows. The specification submitted to the owners,

and approved by them, provided for all-welded construction employing notch-tough steel and a rounded gunwale. She is the first ship to be built by the yard with this type of construction.

The lengthening, deepening and re-piling of the fitting-out basin was one of the most expensive stages of the reconstruction programme. The length was increased by 200ft to 750ft, by forming a cofferdam across the inner end of the existing basin and excavating the soil beyond that point.

Labour relations are undoubtedly the key to the future in British shipbuilding, and while this is a matter for two sides it is clear that the main initiative must come from employers. At Lithgows the cleanliness and general appearance of the yard, which has already been the subject of comment in *THE SHIPPING WORLD*, must do much to inculcate the good morale that any firm needs. Among other steps which have been taken, mention must be made of the washroom provided in the canteen building, which has showers and lockers so that workpeople can change before going home if they wish. In the first place 180 lockers were provided, and these were not immediately taken up. Now, however, they are all in use and a further 180 are to be installed.



A fabricated bow section ready for the berth

Oil Topics

MORE GAS CARGOES

THE NUMBER of cargoes that can be carried by tanker continues to grow. One that will be new to most people is butadiene, the raw material for synthetic rubber, which is a gas that can be carried refrigerated down to a liquid state in the same manner as methane. As with the carriage of methane, the carriage of butadiene by tanker originated in the United States, which may be considered the home of synthetic rubber. However, storage plants are now being opened up in Europe. One is in service in the south of France on the Etang de Beurre, the large tidal lake near Marseilles which is also the home of oil refineries. Reports in the press now indicate that another is to be built at Rotterdam. The firm concerned is Texas Butadiene & Chemical International Ltd, which has a plant at Houston, Texas, as well as those mentioned in Europe. Refrigerated methane tankers can carry butadiene. The British experimental methane carrier *Methane Pioneer* has been in this service since her experimental voyages with methane to Canvey Island, and there is another vessel in use which is owned by Soc. Maritime Shell.

Progress in Japan

ON TOP of its rapidly growing oil consumption, Japan is likely to become an important centre for the consumption of liquefied petroleum gas, and the construction there of vessels for its carriage is flourishing. Mention has already been made in THE SHIPPING WORLD of the technique of refrigerating L.P.G. instead of compressing it, and of the 20,000-grt tanker employing this technique which is being built there for the Bridgestone Liquefied Gas Co, a subsidiary of a tyre manufacturing company. This vessel is due to enter service next February. Other vessels that before long will be engaged in the importation of L.P.G. to Japan include the *Caltex Suez*, a vessel

of 16,674 dwt which is to be converted by Hitachi Shipbuilding & Engineering Co into a refrigerated L.P.G. carrier with which Japan Petroleum will import L.P.G. from Caltex in the Middle East. This vessel is due to enter service next March. Another vessel, due to complete in December next, is a combined refrigerated L.P.G. and crude oil tanker of 45,000 dwt building by the Mitsui Shipbuilding & Engineering Co Ltd. In addition to the ships mentioned, smaller vessels of the normal pressurised type are under construction to augment those already in service in coastal waters, distributing L.P.G. from Japanese oil refineries.

RECENT SHIP SALES

Cargo steamer *Sylvia Cord* (ex-*Selma Dan*, ex-*Elqui*, ex-*Selma*, 2,400 dwt, 1,512 grt, 768 nrt, built 1937 by A/S Fredrikstad M.V.) sold by Concord Line A/S, Copenhagen, to Panamanian buyers and renamed *Audax*.

Cargo steamer *Matheus* (ex-*Devonbrook*, ex-*Adjutant*, ex-*Myrtlepark*, 3,120 dwt, 1,946 grt, 1,126 nrt, built 1922 by Grangemouth Dockyard Co Ltd) sold by Laiva O/Y Roine (Varustaimo Heusala & Co), Helsingfors, to the Silver Trading & Transport Co of Panama, and renamed *Revenca*.

Cargo steamer *Rino Esposito* (ex-*Elisabeth Lysaght*, 1,505 dwt, 1,037 grt, 604 nrt, built 1938 by S. P. Austin & Son Ltd) sold by Francesca Esposito, Naples, to the Soc. di Arm. Motonave Zaffiro, Naples, and renamed *Zaffiro*.

Motor vessel *Temnaren* (6,000 dwt, 3,169 grt, 1,714 nrt, built 1939 by Lindholmens Varv) sold by Per Carlsson, Gothenburg, to British buyers who will rename her *Worthy Down*.

Tank steamer *Delphini* (ex-*Caribbean*, ex-*Gulf Caribbean*, 9,356 grt, 5,486 nrt, built 1942 by the Sun Shipbuilding & Drydock Co) sold by Panoeanica Shipping Corp. S.A., Monrovia, to Italian shipbreakers for \$240,000 with delivery Genoa.

Motor tanker *Lingula* (6,445 grt, 3,618 nrt, built 1947 by Harland & Wolff Ltd) sold by Shell Tankers Ltd to Bisco for about £14 10s per ton light displacement. She had been laid up in the River Blackwater since 26 May 1960.

Motor tanker *Kurdistan* (12,282 dwt, 8,322 grt, 4,820 nrt, built 1950 by Harland & Wolff Ltd) sold by Hindustan Steam Shipping Co Ltd to Bulgarian buyers and renamed *Arda*.

Motor tanker *Eli Knutsen* (ex-*Knut Knutsen O.A.S.*, 17,440 dwt, 11,110 grt, 6,617 nrt, built 1949 by A/B Gotaverken) sold by D/S A/S Jeanette Skinner (Knut Knutsen O.A.S.), Hauge-sund, to Argentine buyers for about £280,000.

Cargo steamer *Bonde* (ex-*Peter Lassen*, 10,900 dwt, 7,207 grt, 4,360 nrt, built Los Angeles 1944 by California Shipbuilding Corp.) sold by Henriksens Rederi A/S (Dagfin Henriksen), Oslo, for £130,000 with delivery Japan.

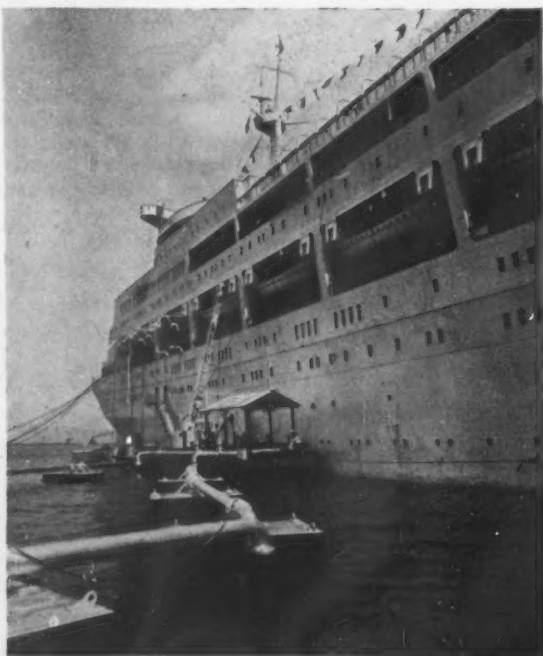
Cargo steamer *Baro* (1,530 dwt, 1,517 grt, 684 nrt, built 1950 by the Blyth Drydock & Shipbuilding Co Ltd) sold by Elder Dempster Lines Ltd to Panamanian buyers for about £30,000 and being renamed *Sophie Maris*.

Motor vessel *Tanga* (ex-*Bullaren*, 9,270 dwt, 5,729 grt, 3,365 nrt, built 1918 by A/B Gotaverken) sold by John T. Essberger, Hamburg, to London buyers for about £80,000, subject inspection, and to be offered for resale to Japanese shipbreakers.

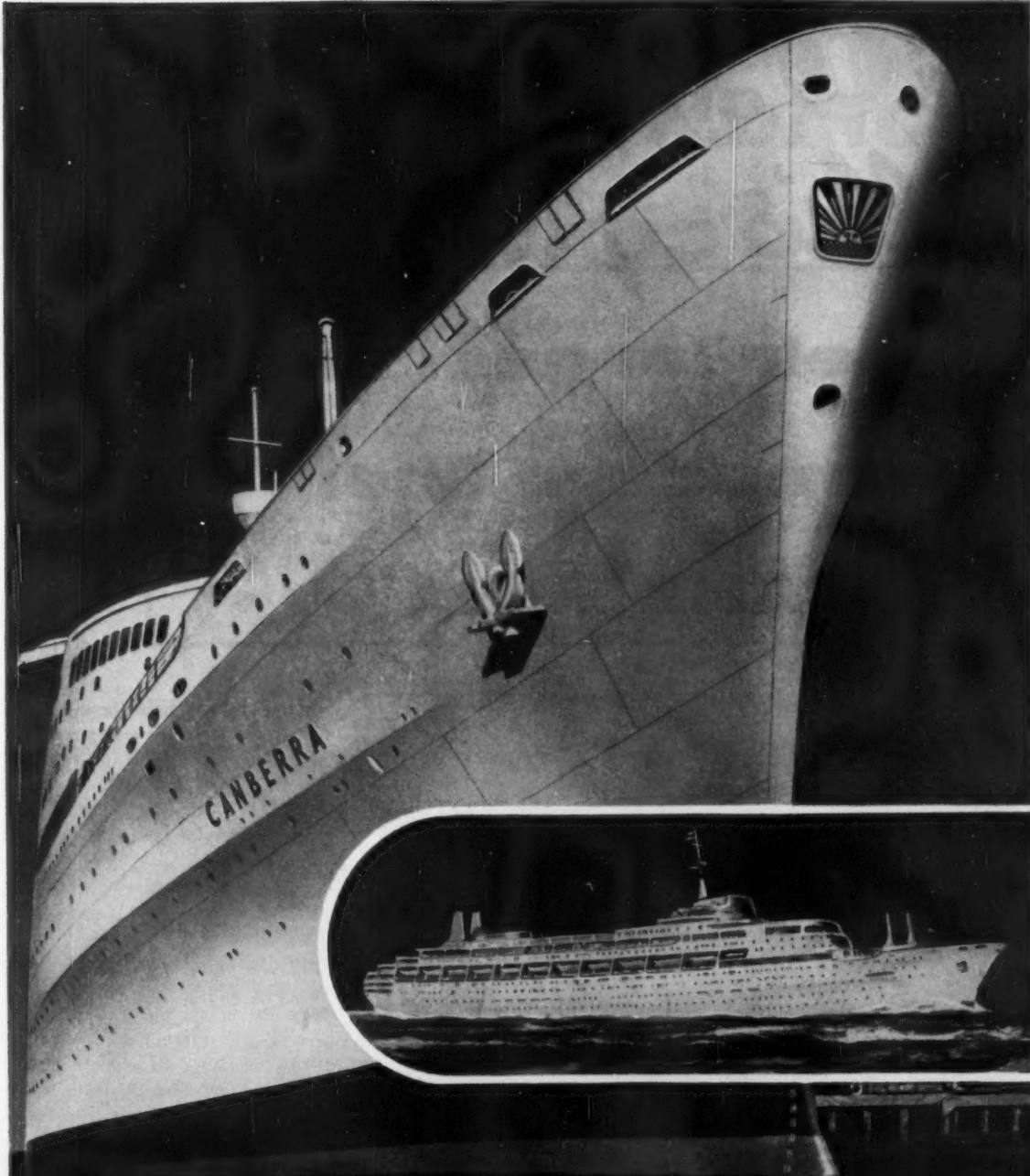
Cargo steamer *Akera* (ex-*Stancleeve*, 8,650 dwt, 5,971 grt, 3,642 nrt, built 1942 by Wm. Pickersgill & Sons Ltd) sold by Skibs A/S Preba (Prebensen & Blakstad), Risor, to Japanese shipbreakers for £66,500. A previous sale to Indian buyers fell through.

Cargo steamer *Revan* (ex-*Alberto Gianpaolo*, ex-*Ulmus*, ex-*Racoczi Ferenc*, ex-*Ulmus*, 2,813 grt, 1,686 nrt, built Port Glasgow 1926 by Dunlop, Bremner & Co Ltd) sold by Sandikzade Rusen Ogullari, Istanbul, to Italian shipbreakers with prompt delivery Monfalcone, for about £30,000.

Motor vessel *Ilici* (12,700 dwt, 8,649 grt, 5,132 nrt, built 1960 by Cantieri Navali Riuniti, Ancona) sold by Navigazione "Arenella" S.p.A., Palermo, to buyers reported to be the Albanian Government for about £1 mn.



Like the "Oriana", the "Canberra" is to bunker regularly at Aden. Here she is taking 4,000 tons of fuel from the B.P. terminal on her maiden voyage



CANBERRA

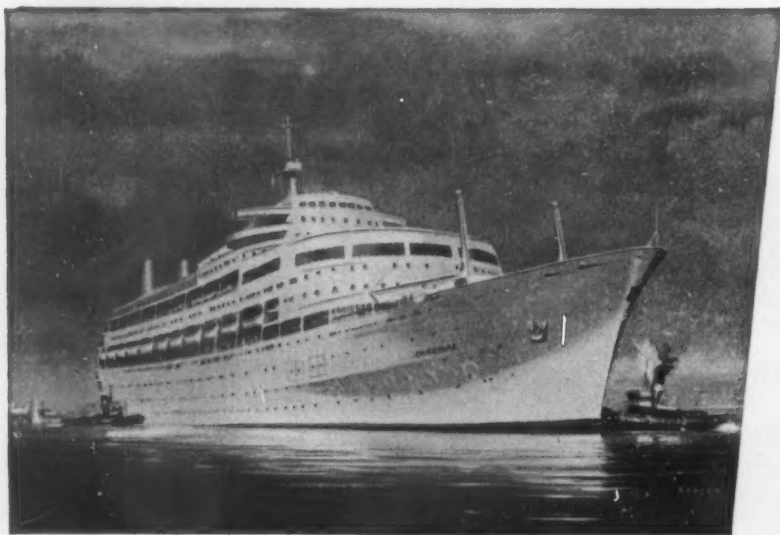
H & W

HARLAND AND WOLFF

M1019A

BELFAST GLASGOW LONDON LIVERPOOL SOUTHAMPTON

P & O chose
Collis CONVEYORS
for their largest and
most modern liner
S.S. "CANBERRA"



Artist's impression of s.s. "Canberra"

Famous throughout the world for their industrial conveying systems, Collis now go to sea on P & O's most modern liners s.s. "CANBERRA". With their extensive experience of mechanical handling and their reputation for reliability, Collis were a natural choice. They responded by developing an imaginative and ingenious system for the automatic loading, off-loading and conveying baggage and stores to various parts of the ship speedily, efficiently and economically. All this was achieved while still preserving the original clean lines of the "CANBERRA" by designing the equipment as an integral part of the ship.

In the Service of Industry since 1867

J. Collis & Sons Ltd.

MECHANICAL HANDLING ENGINEERS

DEPT. M.2. REGENT SQUARE, GRAY'S INN ROAD, LONDON, W.C.1

Telephone: TERminus 6141

SCANDINAVIAN SHIPPING AND SHIPBUILDING

A REVIEW OF SOME CURRENT DEVELOPMENTS

CONTENTS

| | |
|---|-----|
| PROGRESS OF DANISH SHIPYARD | 568 |
| THE NEW ARENDAL SHIPYARD | 569 |
| ODENSE EXTENSION AT LINDO | 571 |
| PASSENGER LINER "FUNCHAL" | 573 |
| SHIPPING AND SHIPBUILDING IN FINLAND | 574 |
| GENERAL PURPOSE TANKER FROM NORWEGIAN YARD .. | 576 |
| CAR AND PASSENGER FERRY "SKANDIA" | 577 |
| THE TANKER "SEA SERPENT" | 578 |
| PROGRESS AT ERIKSBERG | 582 |

*Progress with the new extension of the
Burmeister & Wain shipyard at Copenhagen is described overleaf*



Progress of Danish Shipyard

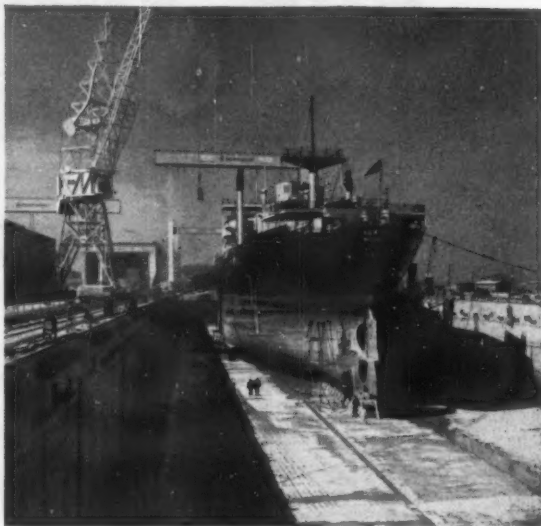
MODERNISATION OF BURMEISTER & WAIN'S YARD AT COPENHAGEN

THE MODERNISATION scheme which included the expansion of Burmeister & Wain's shipyard at Copenhagen is now nearing completion, and the dry dock in which tankers up to 70,000 dwt can be built or repaired has already been put into service, the first ship to be built in the new dock being the *Stove Transport* (SW, 10.5.61), an oil tanker of 15,600 dwt. Progress on this yard, which is costing over 70 mn Danish kroner, was described in THE SHIPPING WORLD of 6 July 1960. Owing to the limited area available on the existing site, it was decided to reclaim land on the seaward side of the yard on the Sound and build there a dock which could be used not only for the construction of new ships but also for repair work.

The new dock has a length of 787ft 3in, which can at a later date be increased to 900ft if necessary, and a breadth of 124ft 8in, the depth being 29ft 6in from the edge of the dock to the bottom. Although the cost of constructing a building dock is high, greater than that of a slipway, it must be noted that there is a considerable saving in material and time which naturally offsets the initial cost. There is also a considerable reduction in the number of sections to be prefabricated, and it is, in point of fact, estimated that as much tonnage can be built in the dock as on two conventional slipways.

Fabrication Shops

There are to be two large shops in which sections will be fabricated, one of which is now complete, and over 80 per cent of the construction work will be completed under cover. Sections can be moved from one shed to the other by means of a bogie running on rails. Hitherto sections of no more than 50 tons were prefabricated in the yard, but with the new equipment that has been installed it will be possible to handle sections weighing up to 600 tons. The general layout of the new yard can be clearly seen from the aerial photograph on page 567.



[The "Sea Isle" being lengthened in the new building dock

The small building in the foreground to the left of the building dock is a plate shop, from which finished material is sent direct to the fabricating halls.

The crane capacity is large and consists mainly of Krupp-Ardelt gantry cranes running on rails. The two cranes over the building dock are capable of lifting loads of 600 tons between them, the four hooks sharing equal loads. In addition there is a 10-ton crane running on tracks on each side of the dock. The lifting height is about 131ft above the average sea level. The cranes are electric, controlled on the Ward-Leonard system.

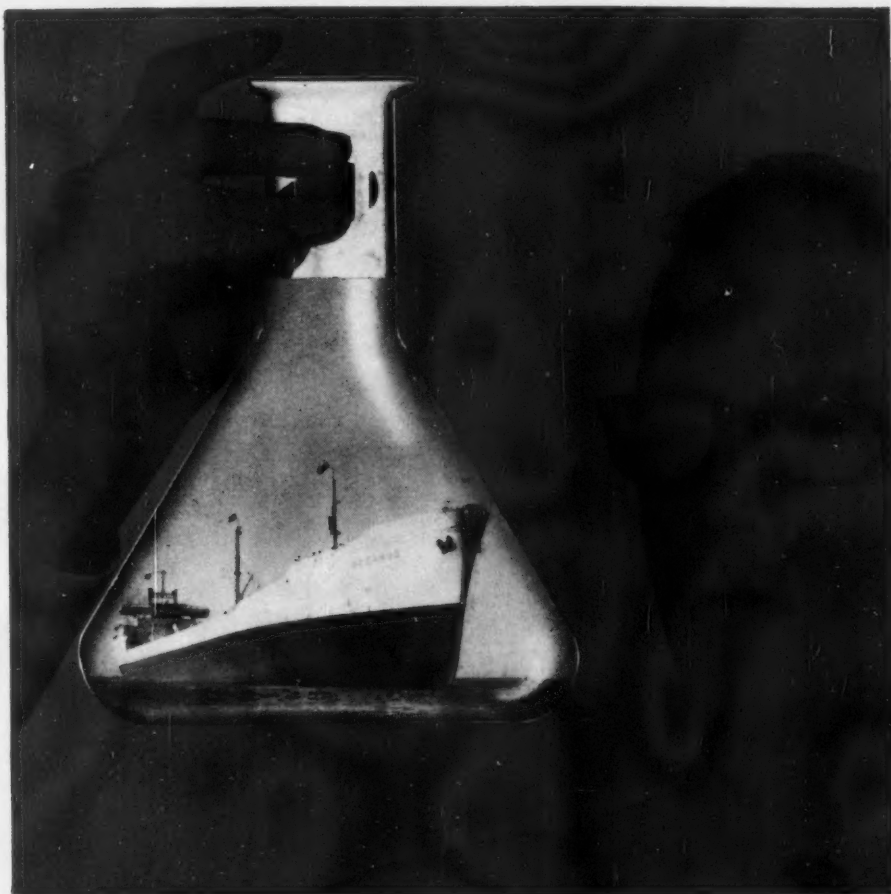
No 1 shop, shown at the upper end of the building dock, is served by two gantry cranes each having two hooks capable of lifting 60 tons, so that loads up to 240 tons can be handled. There is also a 15-ton overhead travelling crane. The door in the end of this shed facing the building berth is of particular interest as it comprises an upper bascule door and two lower doors which slide open so that prefabricated sections can be lifted outside on to the rail carriage for transportation. There is also a gantry crane running on rails between the plate shop and No 1 shop.

On either side of the building dock there are long passage ways carrying supply lines. The main pump room contains a vertical pump, of



Interior of No 1 shop, which is served by two gantry cranes each having two hooks capable of lifting 60 tons

For economical operation at sea



Safety at sea is not merely a matter of navigation and seaworthy ships — reliability of engines is also of prime importance.

It is only natural, therefore, that responsible shipowners are highly critical in their choice of fuels and lubricants. More and more shipowners are turning to NYNÄS: and with good reason. NYNÄS marine products — bunker oils and Nymarol lubricants — are backed by an intensive research activity at the NYNÄS refineries.

The work of the internationally recognised NYNÄS laboratories guarantees that each engine receives exactly the right oils — oils highly resistant to breakdown, promoting sure and economical operation.

Besides speedy deliveries anywhere in Sweden NYNÄS customers also have at their command a trustworthy technical service.

For shipping NYNÄS is synonymous with security — and economical operation.

NYNÄS



MODERN SWEDISH SHIPBUILDING

M/T FERNMOUNT

34,240 tons d. w. 15,000 shp
17½ knots

Built by
Uddevallavarvet AB
for
Fearnley & Eger, Oslo

In little more than a decade Uddevallavarvet has become a shipyard of international reputation and capacity. With up-to-date equipment Uddevallavarvet combines the traditional craftsmanship of its workers with the most modern and efficient shipbuilding techniques. The yard has facilities for building all kinds of vessels up to 130,000 tons d. w.

The orders for newbuilding placed with Uddevallavarvet—now amounting to some 800,000 tons d. w.—are but one striking proof of the confidence that Uddevallavarvet has gained from discerning shipowners all over the world. Another evidence is the ever growing fleet of modern, efficient ships built by the yard and now in service on The Seven Seas.

UDDEVALLAVARVET

UDDEVALLA

SWEDEN

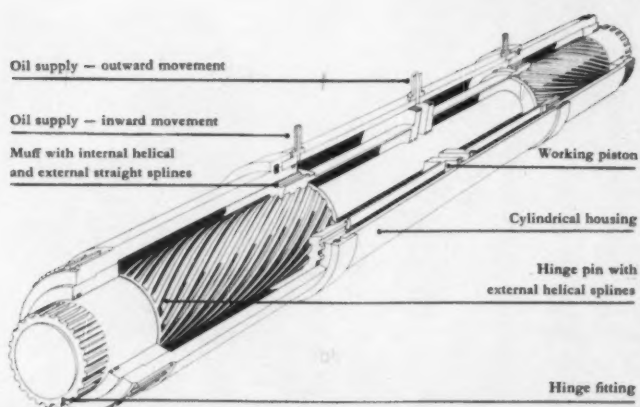
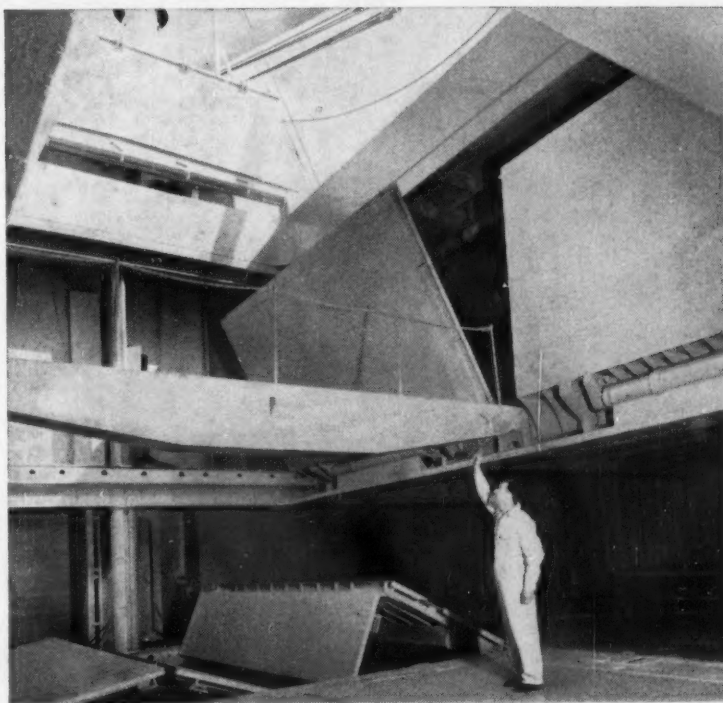


10 minutes... and all hatches opened!

GÖTAVERKEN'S hydraulically operated hatch covers save time, space and work

Quick turnaround in port is essential for a vessel's profitability. Loading and unloading must be fast and efficient. To facilitate this, Götaverken has designed the Hydraulorque Hinge cover.

There is a control point on the weather deck at every hatch opening. From these points, covers are individually operated simply and quickly by the aid of hydraulorque hinges which are connected to a common pressure pipe system. On vessels so far equipped with Hydraulorque Hinge covers, a cover can be opened in 30 to 60 seconds and all covers in 10 minutes. A hydraulorque hinge offers security — a cover can never fall by itself since the hydraulorque must also be operated when the cover is to be closed.



The Hydraulorque Hinge is made either for an angular movement of 90 degrees, when it is fitted between the cover and the hatch coaming; or for an angular movement of 180 degrees, when it is located in the joint between two cover sections. These two alternatives offer many possibilities to vary the fitting of weather and 'tween deck covers in the needs of different vessel types. For 'tween decks, covers are built flush with the deck so that forklift trucks can operate freely in cargo holds.

Representatives in Scotland:

MC CULLOCH & MILLER
180 West Regent Street, Glasgow C 2



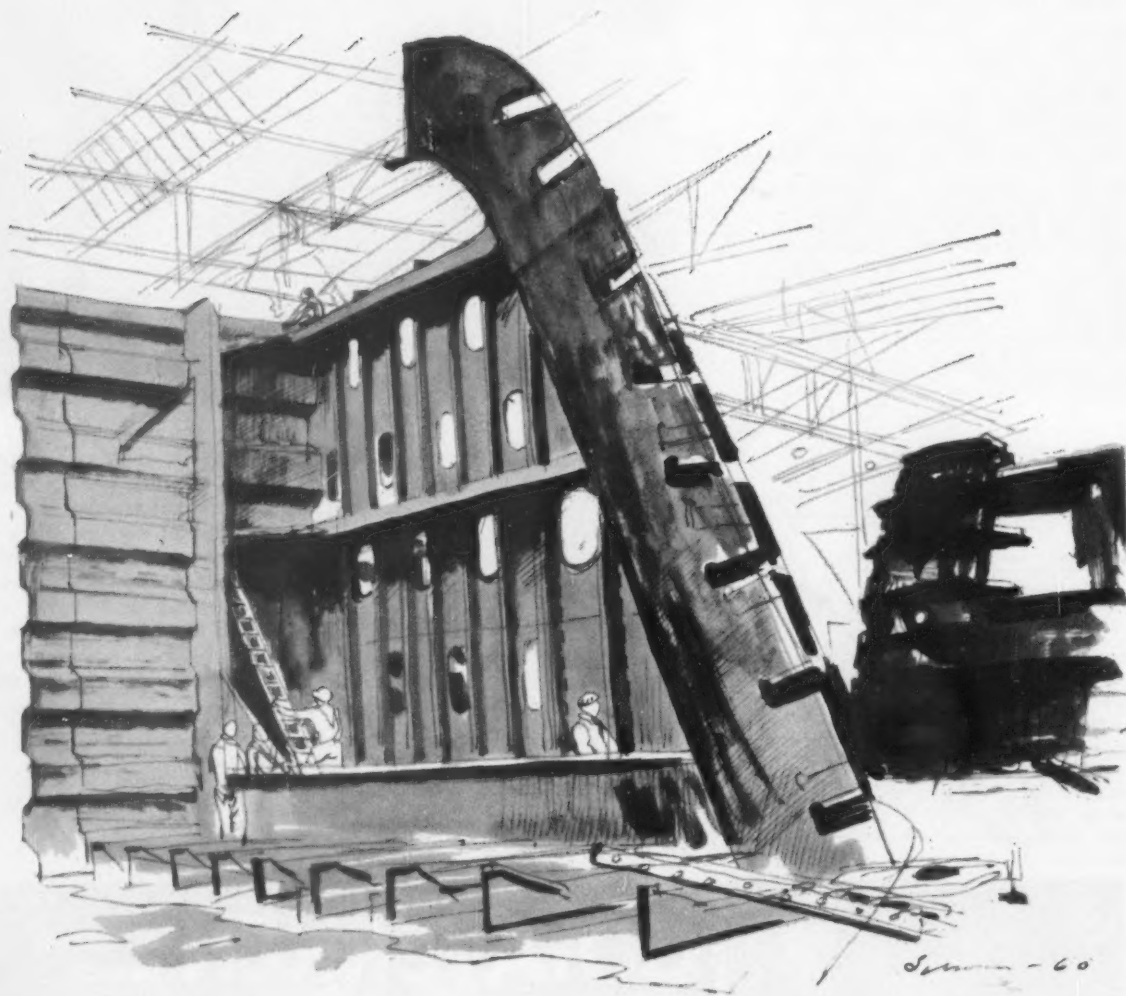
GÖTAVERKEN

**GÖTEBORG
SWEDEN**



Prefabrication is a step towards cheaper ships. The construction of large units indoors for later assembly on the slipways results in a considerable reduction in construction-time and especially in the time spent on the slipway. At Öresundsvärvet prefabrication has been planned on a completely rational basis. We can build sections of up to 70 tons indoors and then transport them with ease to the quickly-growing hulls on the slipways.

ÖRESUNDSVARVET
LANDSKRONA  **SWEDEN**





During 1960 we inaugurated a new 100.000 tons dry dock situated parallel with our three building berths.

...IN STEP WITH THE DEMANDS

A new floating dock with 30.000 tons lifting power is under construction and will replace the middle dock of 7.750 tons.



OF INTERNATIONAL SHIPPING...

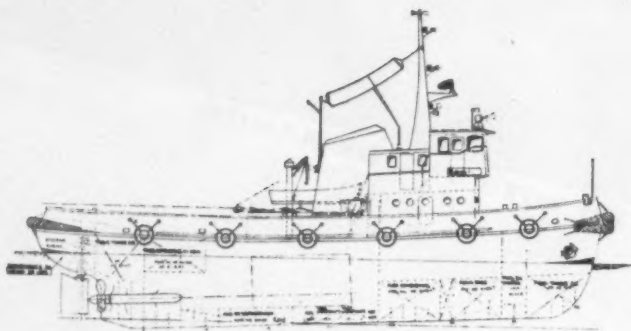


We are building a new diesel assembly hall, 140 metres in length and connecting to the engine shop.

Telegrams: "ERIKSBERGIA"
Telex 2535
Address: Fack, Göteborg 8

ERIKSBERGS
MEK. VERKST. AB. GÖTEBORG
FOUNDED 1853

TWO MORE TUG-BOATS FOR BRAZIL



In 1959 we delivered the two tug-boats Netuno and Jupiter to Petroleo Brasileiro, S.A., Rio de Janeiro. Now we are building two further tugs for the same owner. Netuno and Jupiter of 180 grt have a machinery developing 1.670 h.p. The new tugs, which will be delivered during 1961, have the same tonnage but a machinery of 1.430 h.p.

AKTIEBOLAGET ÅSIVERKEN
ÅMÅL, SWEDEN

Port of Gothenburg—

Central Position in Scandinavia



THE PORT OF GOTHENBURG is increasing its resources year by year. Modern quays and first class mechanical equipment for a fast, safe and economical handling of all types of cargoes.

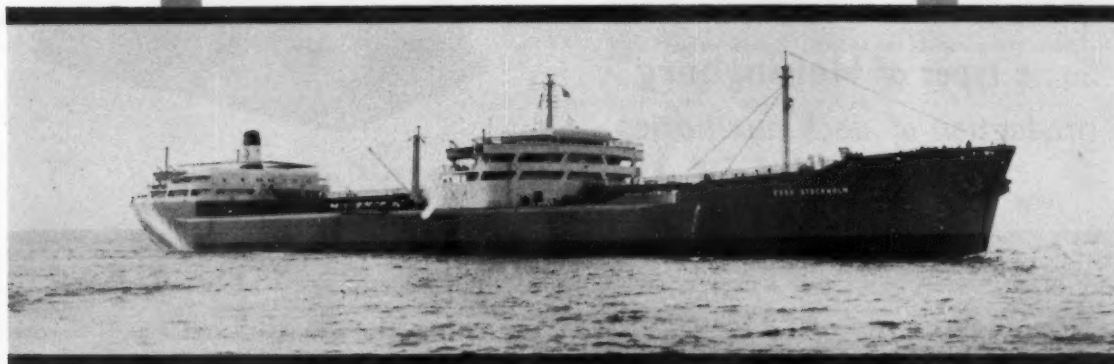
THE PORT OF GOTHENBURG is connected with the whole world by frequent services of more than 70 regular shipping lines, offering the port's customers safety and efficiency in planning their transports.

For further information please apply to
Göteborgs Hamn, P.O.B. 453, Gothenburg 1

INTERNATIONAL OIL COMPANIES BUILD AT KOCKUMS

S.T. "ESSO STOCKHOLM"

49,400 tons d.w. — 17.2 knots
delivered in March 1961 to the Swedish Esso Co.



Ships completed for Oil Companies:

| | | | |
|-------------|-----------------------|------------|------|
| Texaco: | M. T. North America | 23,965 tdw | 1952 |
| Texaco: | M. T. Brasil | 15,625 " | 1952 |
| SFP (Paris) | M. T. Zubaïr | 24,620 " | 1954 |
| SFP (Paris) | M. T. Butmah | 32,970 " | 1957 |
| Texaco: | S. T. Texaco Iowa | 40,950 " | 1959 |
| Stanvac: | S. T. Stanvac Horizon | 41,050 " | 1959 |
| Esso: | S. T. Esso Brussels | 40,800 " | 1959 |
| Texaco: | S. T. Texaco Alaska | 41,050 " | 1960 |
| Esso: | S. T. Esso Stockholm | 49,400 " | 1961 |

Ships on order:

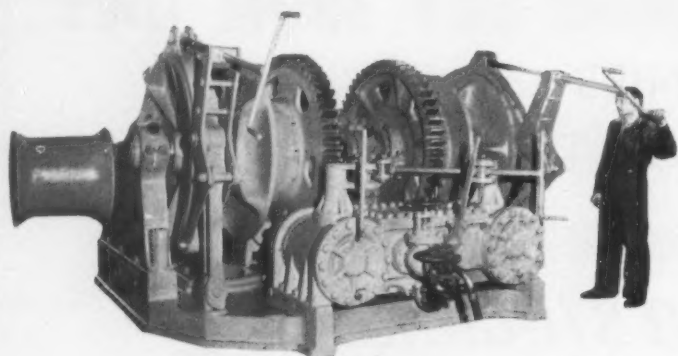
| | | | |
|----------|----------------|------------|------|
| Esso: | Turbine tanker | 77,000 tdw | 1962 |
| OK: | Motor tanker | 41,000 " | 1962 |
| Stanvac: | Turbine tanker | 47,700 " | 1963 |
| Esso: | Turbine tanker | 86,000 " | 1963 |



KOCKUMS

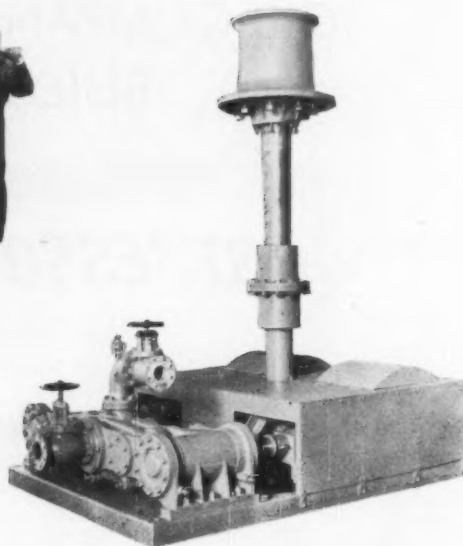
MEKANISKA VERKSTADS AB • MALMÖ • SWEDEN

SHIPBUILDERS UP TO 110,000 TONS D.W.

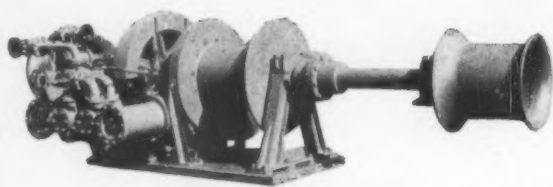


Windlass type A/5

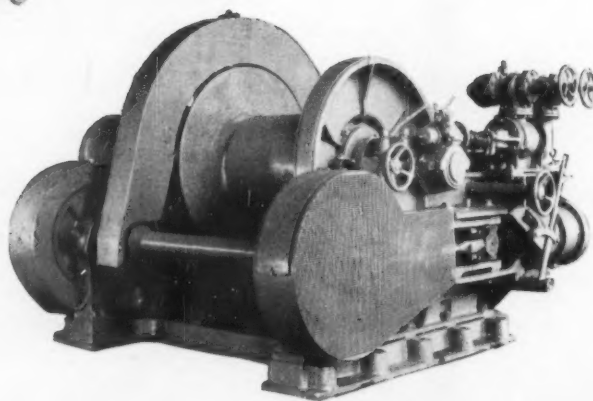
Some types of **Helsingborg**
production of deck auxiliaries



Capstan type FSF 10



Automatic mooring winch
type MAW 20



Automatic mooring winch type AUFW 15

HELSINGBORGS VARFS AKTIEBOLAG

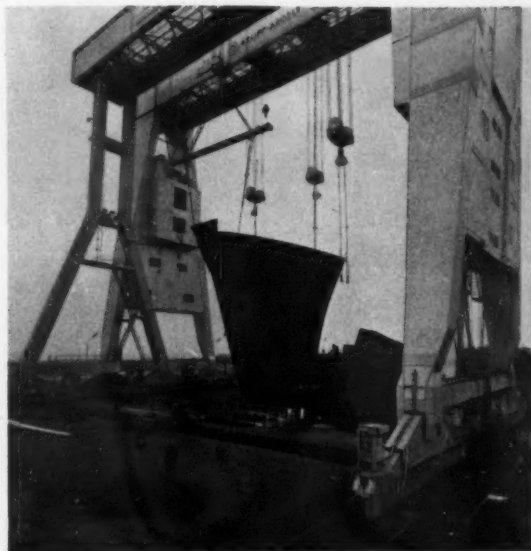
HELSINGBORG SWEDEN

Scandinavian Shipping and Shipbuilding

about 8,600 tons/hour capacity, which is capable of emptying the dock in about 7 hours. Flooding can be carried out in about 1½ hours. Provision has been made for increased pump capacity should it be decided at some future date to enlarge the dock.

Mention should also be made of the new test house which has been built at the company's works at Christianshavn, where the first of the new large-bore B & W engines are being run. This shop has a height of about 91ft, a width of 75ft and a length of 295ft, and is sufficiently large to enable three of the largest engines to be erected inside. The building is supported by a frame structure comprising ten pairs of steel columns, each designed to take a load of up to 800 tons (SW, 6.6.60).

The foundation for the test bed has been designed as a pre-stressed concrete structure and consists of a block of concrete of 42,360 cu ft. Testing of engines is carried out with a Heenan & Froude 30,000-hp dynamometer weighing 80 tons—the largest to be exported from England. Cranage consists of one 100-tons and two 35-tons cranes, the larger crane being sited above the two smaller ones. The shop is heated by radiant heat. Special silencers reduce noise from the engines while running on test.



Bow section being lifted by two 300-tons gantry cranes

The New Arendal Shipyard

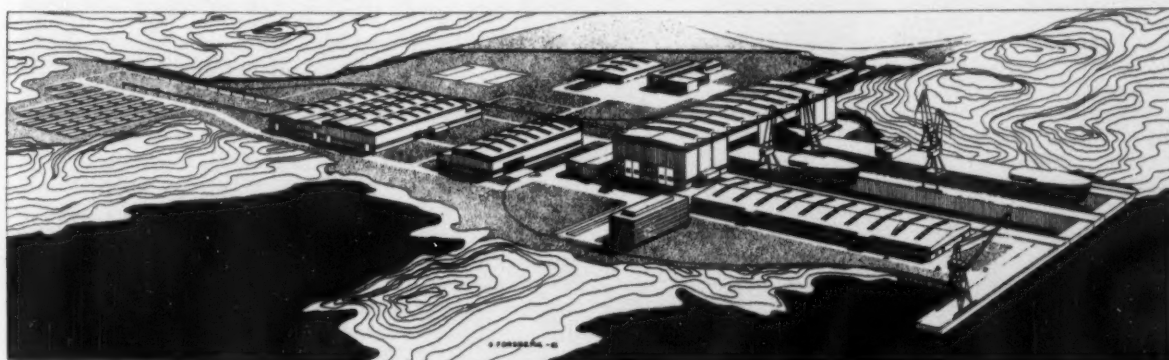
LEVELLING OF NEW GOTAVERKEN YARD NOW COMPLETED

SINCE the first account of the new Götaverken shipyard at Arendal, near Gothenburg, was given in THE SHIPPING WORLD of 8 April 1959, considerable progress has been made, and the final levelling has now been completed. Work on the two building docks (which are located partly within Gasesund bay, which has been drained), is well under way. In order that this yard can be built, about 560,000 cu m of solid rock have been blasted away, and about 300,000 cu m of earth have been removed. When completed, early in 1963, it will be possible to build ships their up to about 140,000 dwt: the cost is estimated at about Sw/kr 150 mn (£10-14 million), and it will be one of the greatest industrial developments in Sweden during the past ten years.

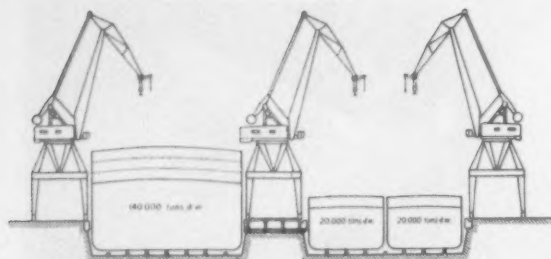
It is not possible to build ships of more than about 40,000 dwt at the existing Götaverken shipyard, so it was

decided to build a yard out at Arendal; not to increase the annual output, but so that ships of greater tonnage could be built, and built at a lower cost. As explained in the article in April 1959, the ships built at the new yard will be constructed on the conveyor belt principle. Sections weighing up to 200 tons will be completed in large welding and erection shops built adjacent to the top of the building docks.

The building docks extend into the erection hall, and contain the conveyor belts on which new ships will gradually leave the erection hall stern first as each section is completed and added. These conveyor belts with steel rollers, the arrangement of which is completely new, are covered by patents for which Götaverken has applied, together with the other new building methods which will be used in the new yard. The designer is Mr Nils



The layout of Götaverken's new shipyard at Arendal. There is about one kilometre (about 1,100 yards) between the steel stockyard shown at the extreme left and the gates of the building docks shown to the extreme right of the sketch. The production is in accordance with "the straight production-line" technique. The ship sections are completed and joined together in the large "hull erection hall" at the head of the building docks and as each part is completed the ship is gradually pushed out, stern first, into the building dock.

Scandinavian Shipping and Shipbuilding

Cross-section through the two building docks at Arendal. In the dock to the left a ship of 140,000 tons dw is building. To the right it is shown how two 20,000-tonners can be built at the same time in one dock. The cranes in the centre have a working load of 100 tons each, the two others having a working load of 35 tons each

Svensson, a director of Götaverken, who is also responsible for the planning and layout of the new yard.

When a certain amount of the hull construction has been completed, the installation of the machinery and the fitting out of the accommodation and equipment will start. This work will proceed while the remainder of the hull is completed, so that all work on the ship finishes at the same time, i.e. just as the fore end leaves the erection hall. The erection of stern sections of one ship can be started before construction of the previous ship has been fully completed. The process as described above is specially suitable for the construction of large tankers being built as a standard series, but the method is also applicable to other types of ship. Each building dock has been designed to accommodate a tanker of about 140,000 dwt but in order to utilise the full capacity of the yard when building smaller ships, each dock has been made sufficiently wide to accommodate two 20,000-dwt tankers building side by side.

Hull Erection Shop

Foundations for the large hull erection shop are now complete, and erection of the steel framework has begun. The steel structures for the shop have a total weight of 3,700 tons, of which 2,500 tons are being constructed at

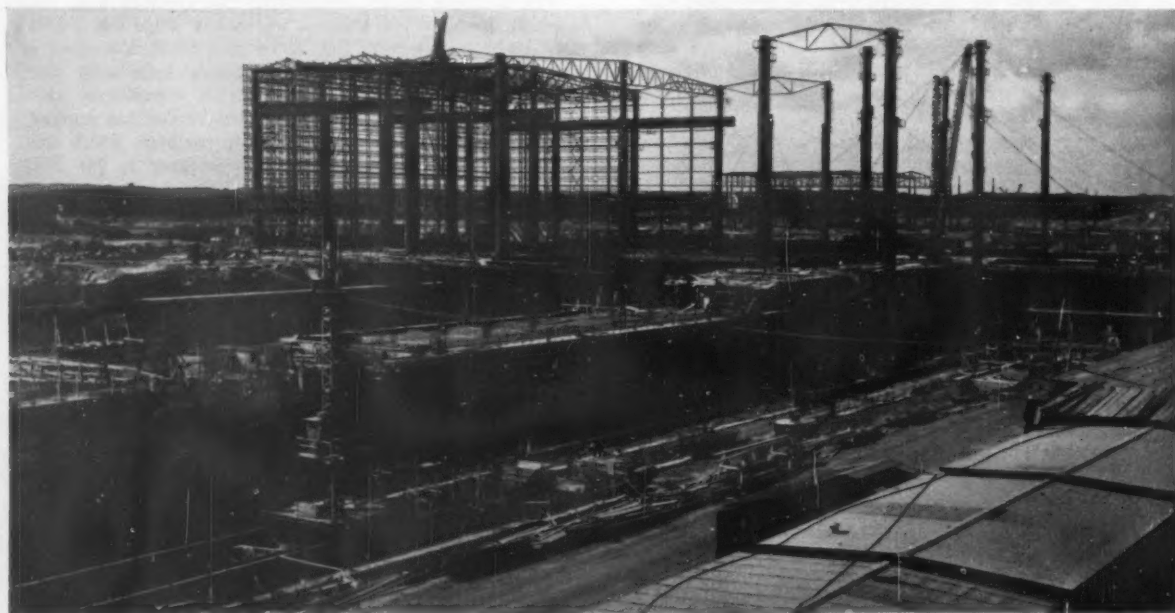
Götaverken. The columns and bays for the shop are built in sections which are welded together in position. This hull erection shop will have two bays, each with a clearance width of 33 metres. It will be 228m long, with an internal clearance height of 30m. In the bay of the shop nearest the docks, the lifting equipment will consist of two 150-tons travelling cranes on an upper track, and two of 15 tons on a lower track. In the other bay there will be two 80-tons travelling cranes and two of 15 tons.

Plate Shop

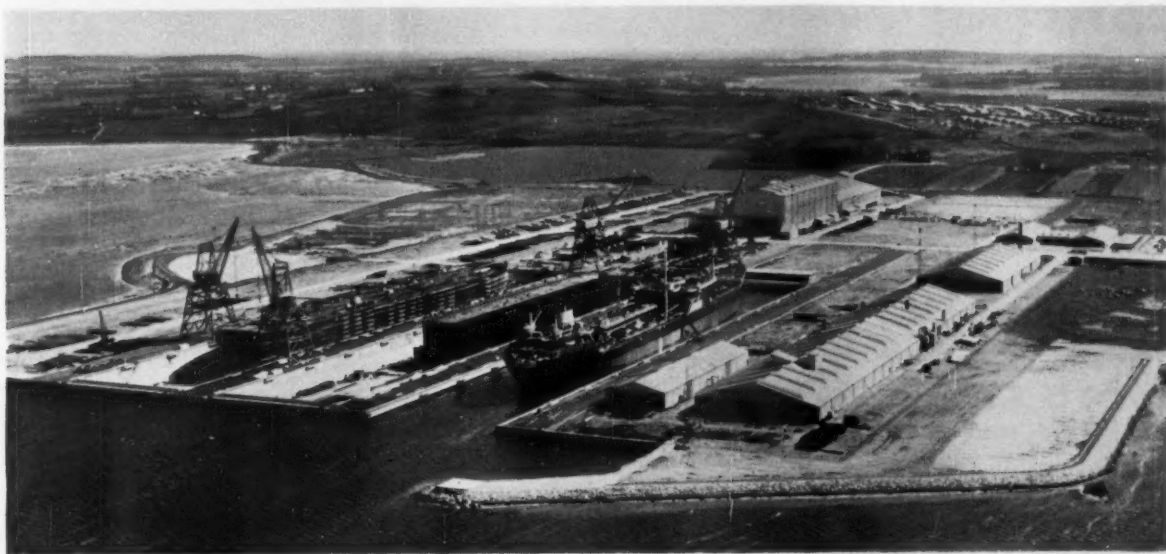
Foundation work is also completed on the plate shop and erection of the steel framework is under way. This shop will be divided into four transverse bays as well as one longitudinal bay. It will have a length of 140m and a width of 160m. The total floor area will be about 22,000 sq m.

The first building to be roofed at the Arendal yard is a heated storehouse, situated at the inner part of the filled-in Gapekilen bay. This storehouse, with a floor area of some 3,500 sq m, is constructed of aerated concrete panels upon a framework of prefabricated concrete beams. Among other major projects at the yard started during the last months is the foundation for a welding shop and service shops. Work is under way for a staff building containing a dispensary, office premises, and places for the trade union, etc, and for a building with changing-rooms, a Turkish bath and a swimming-bath. Recently work on a quay structure has also started.

THE Grängesberg Company, the Swedish producers of iron ore and steel and operators of a big ore fleet, report a gross profit of Kr154,400,000 (£10,375,000) for 1960, as compared with Kr127,100,000 for 1959. Ore deliveries rose from 1,620,000 tons to 2,170,000 tons, including 1,720,000 tons for export. The new steelworks at Oxelösund was partly put into operation during the year, and minor deliveries of heavy plate were effected. The company's fleet totalled 32 vessels aggregating 546,000 dwt at the end of 1960. A combined ore carrier/tanker of 14,200 dwt was delivered early this year, while a further four ships totalling about 100,000 dwt are on order.



View showing Nos 1 and 2 building docks showing the framework for the large hull erection shop. Completion of the new shipyard is due early in 1963



Odense Extension at Lindo

NEW YARD TO BUILD 100,000-TONNERS

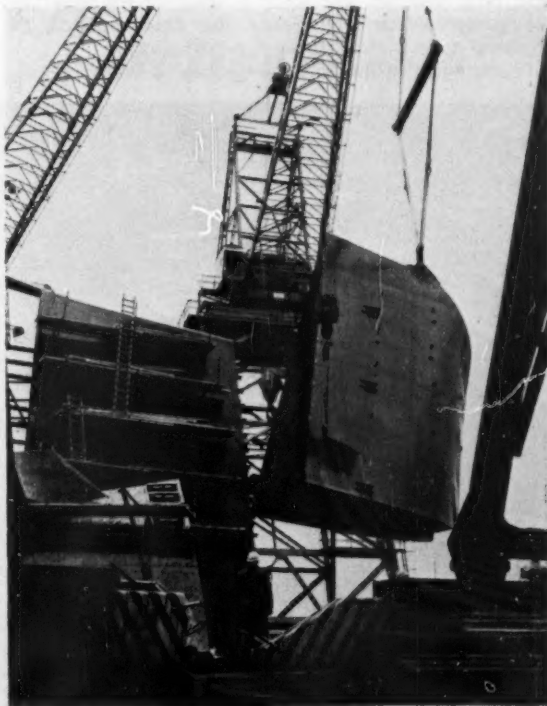
YARD No 1, a 48,500-dwt oil tanker for the California Transport Corporation, of San Francisco, is due to be launched in one of the two building docks of the Lindo yard of Odense Staalskibsværft in September next. She will be followed, in short intervals, by four sisters. At the time of launching she will be the largest vessel built in Denmark so far, but it is worth noting that the Lindo yard in each of its two docks is able to build vessels of up to 100,000 dwt capacity, while the three very modern concrete building berths of the original Odense yard are designed for vessels of 26,000, 36,000 and 42,000 dwt respectively, and are still intensively used.

The decision to build a new yard some ten miles north of the old one was taken because a few bends of the canal leading from the Kattegat to Odense will not allow vessels of more than some 650ft in length to pass without touching the banks. The yard itself is strategically placed at a point where the canal, which is some 200ft wide, makes a 30-degrees bend. It has, therefore, been possible to erect the berths nearly parallel to the canal, so that vessels of practically any length can be launched. It would, also, have been possible to buy sufficient land to allow a new division to be established alongside the old one, but no vessel of more than 42,000 dwt would be able to leave Odense.

The yard was started in 1918 by Mr A. P. Moller and was reorganised in 1944 as a limited liability company with Mr A. P. Moller as chairman and Mr Erik Ringsted as general manager. Now 71 years old, he has been succeeded by Mr K. Kalm. Vessels of all types can be, and have been, built here, but in recent years the yard has made large tankers its speciality. Among some 60 vessels launched since the war, only about ten have been motor cargo liners, three steam turbine tankers, and the rest diesel tankers. At present two large tankers (the *Kathrine Mærsk*, of 39,000 dwt, for A. P. Moller, and *Passy*, of 32,500 dwt, for the Compagnie Nationale de Navigation, Paris) have been launched and are fitting out, while two more, of 42,000 and 34,000 dwt respectively, both for A. P. Moller, will be launched in August next. The order book further includes three 34,000-dwt diesel tankers for

A. P. Moller, one 38,000-dwt diesel tanker for J. Lauritzen, of Copenhagen, and two 12,000/14,000-dwt motor cargo liners for Polish Ocean Lines. This means that the yard is unable to accept new contracts until 1964.

Only shipbuilding takes place in the new Lindo yard, the main office, designing rooms, accountancy, staff office, rate fixing office, purchasing department, planning department etc being retained at Odense. Both yards are self-



A forepeak section being turned on the welding grid

Scandinavian Shipping and Shipbuilding

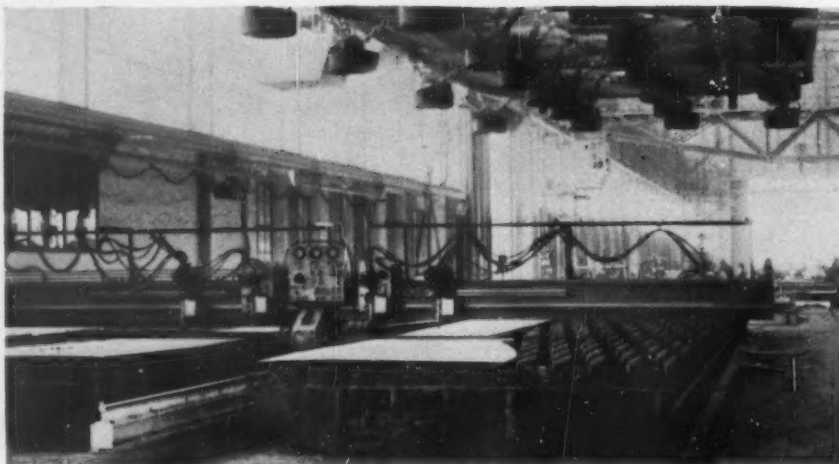
The Messer Sicomat optical profiling machine

contained with workshops, production planning etc, and help one another as need arises to clear bottlenecks of one sort or another. Some 1,850 workmen are employed in the Odense yard and 1,050 at Lindo. The latter figure is expected to increase to 1,500, some 60 to 70 being taken on every month and trained for specialised jobs.

In addition to its proximity to the old yard, the Lindo site had two singular advantages, a natural deep-water frontage and the firm nature of the subsoil, which enabled two large building docks and a fitting-out basin to be built to a simple and practical design. For instance, the thickness of the concrete bottoms of the docks is only about 18in and yet practically no water filters through. Construction of the installation, on 275 acres of land which had been quietly acquired for the purpose, was started in April 1957, and a little more than two years later the yard was formally inaugurated.

Designed to allow the maximum benefit to be drawn from detailed planning and extensive prefabrication, the layout is arranged to ensure that the distance each plate or section has to be carried during the various operations is reduced to a minimum. The two building docks and the fitting-out basin, each 1,000ft long, 150ft wide and 25ft deep, and separated by piers 50ft wide, are arranged parallel to each other and facing west. The gates to each dock are of the floating type and built of pre-stressed concrete. To empty the docks after launching, two pumps have been installed, but space is reserved for a further two pumps which will reduce the time required for emptying a dock from 16 to 5 or 6 hours.

To the north of the docks is the steel discharging quay



and, stretching along the entire yard, the steel stockyard. To the south of the fitting-out basin is a discharging quay for machinery, an assembly quay with covered storage space for machinery, fitting-out workshops, and the main stores and main heating plant. To the east of the docks are found the welding and assembly shops, with a tower for optical marking-off, and with a sandblasting plant.

Discharging of steel plates etc is done at present by one of the tower cranes north of No 1 dock or by mobile cranes. Plates are then carried to the stockyard and from there to the sandblasting plant by a straddle carrier with a magnetic yoke. This machine is handled by one man and can carry up to 15 tons. All plates which go into the ship's hull are sandblasted. After sandblasting the plates go on a roller conveyor to one of two mangles, one for thin and the other for heavy plates. The mangles are located on either side of the optical plate-marking tower.

The welding and assembly shops occupy one structure of two bays, each 30m wide and 216m long. The two bays are served by a number of 12½-ton gantry cranes running the whole length of the structure. The southern part of the welding shop, which is very high, has in addition a 50-ton gantry crane.

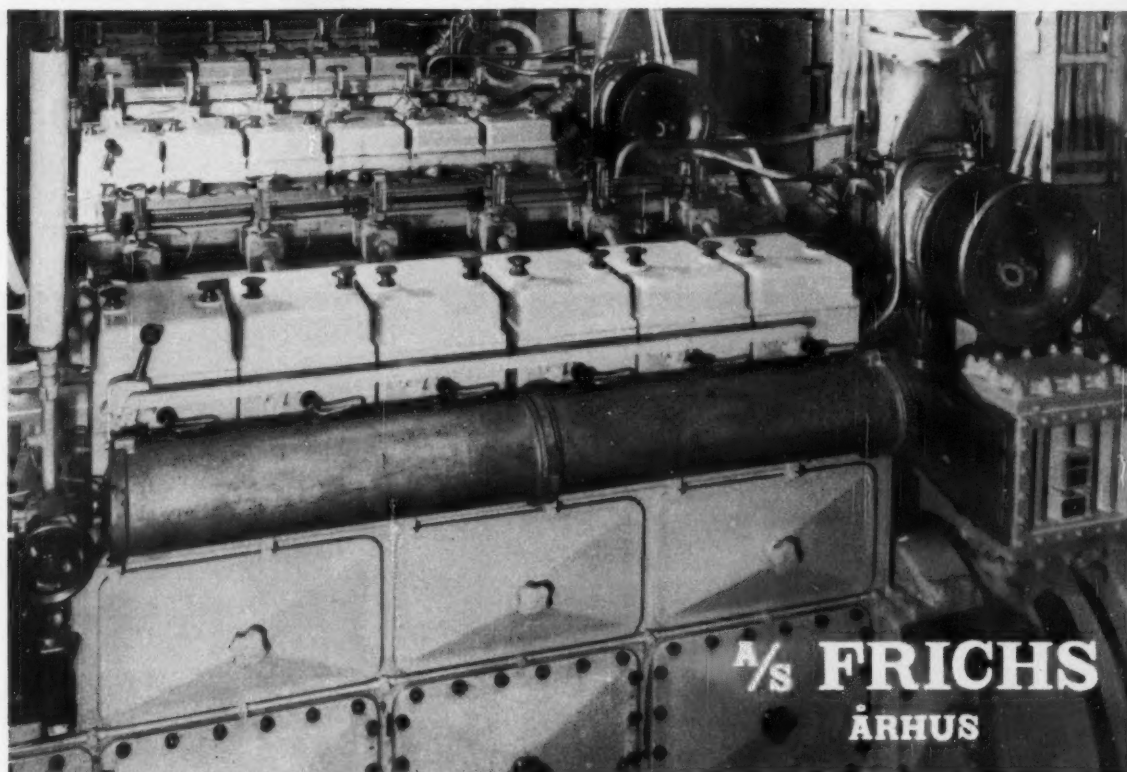
In the eastern end a transverse gantry crane with magnetic yoke carries the plates from the rollers to the tables of the optical marking plant and then distributes them. In the northern part sections and thin plates are processed, while heavy plates are worked in the southern part.

The building docks and the fitting-out basin are served by four 50-ton tower cranes, with 15 tons additional lifting capacity, travelling on rails along the edge of docks and basin. These rails are extended inshore

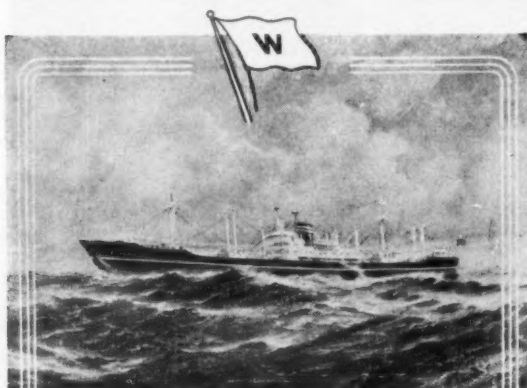
(Continued on page 585)



Another view of the Lindo yard



Marine Auxiliary Generating Sets - A/S FRICHS, Aarhus, Denmark



WILHELMSEN LINES

"For Speed and Service"

Frequent and Regular Sailings
between
The Baltic - Scandinavia - Continental Europe
and
U. S. A. - Cuba - Mexico
South & Port. East Africa - Australia
New Zealand - Red Sea - Persian Gulf
India - Pakistan - Burma - Ceylon - Malaya
Indonesia - Philippines - China - Korea - Japan
Also: U. S. A. / Far East - U. S. A. / West Africa
Refrigerated Space - Passenger Accommodation

WILH. WILHELMSEN
Oslo - Norway

WORLD WIDE CARGO SERVICES

We Deliver---

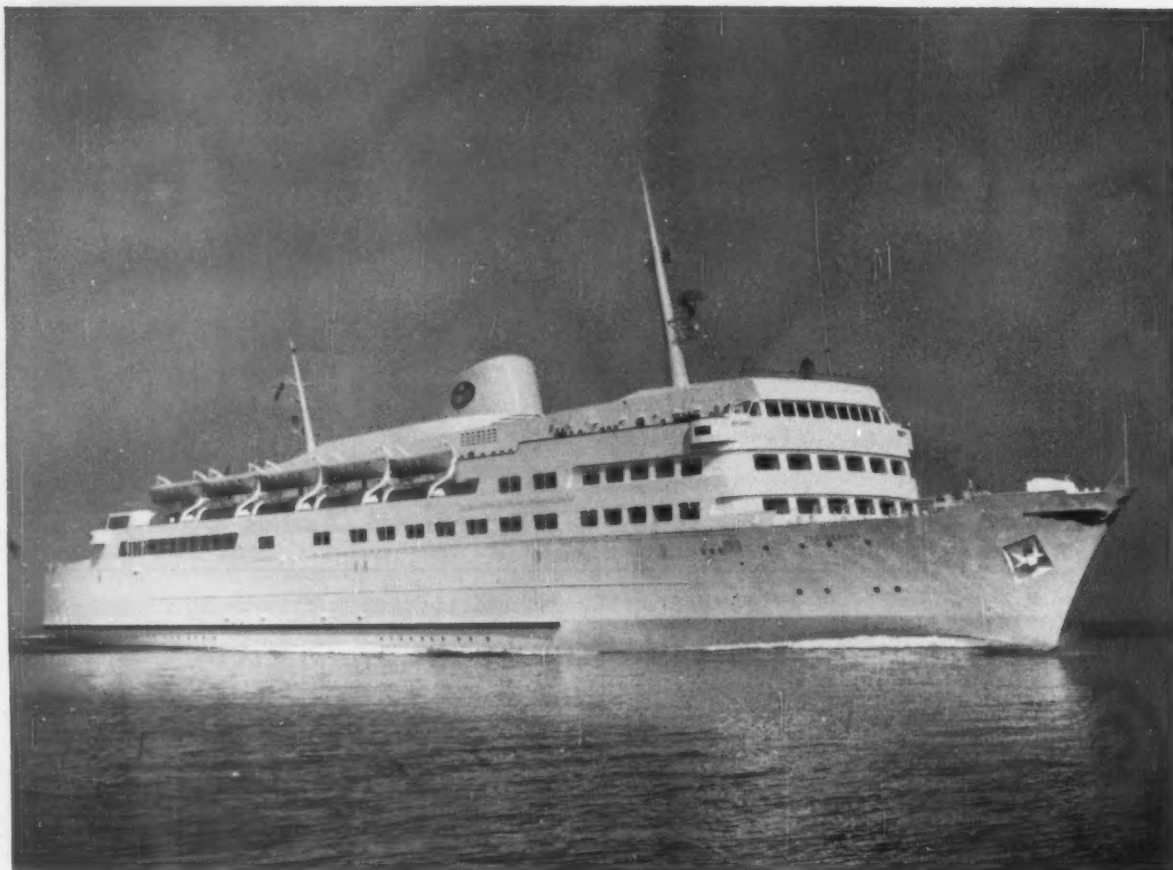
- 'SKI' (MIDI-PRESS) Ventilation and Air Conditioning Systems
- 'SKI' Refrigerating Plant (ALL SIZES)
- 'SKI' Cafeteria
- 'SKI' Refrigerated Containers
- 'SKI' Drinking Water Coolers
- 'SKI' Refrigerators, etc.

A/S EDCO

Fred Olsensgt 1, Oslo
Cables: EDCOAGENCY

m/f "Trelleborg"

Built 1958 for the
SWEDISH STATE RAILWAYS for the TRELLEBORG-SASSNITZ SERVICE



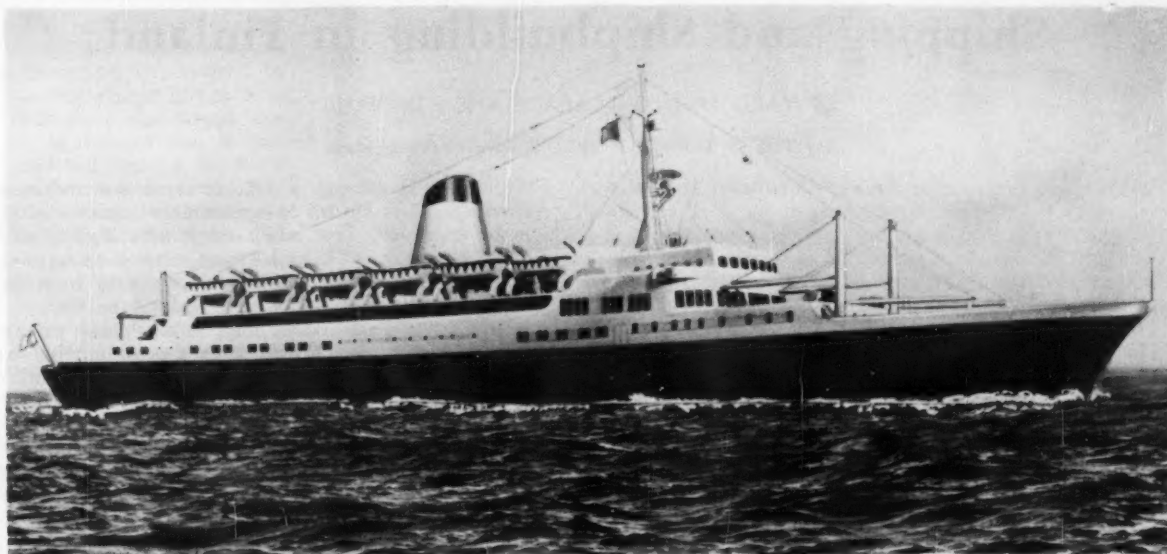
PASSENGER VESSELS ★ CARGO VESSELS
FRUIT VESSELS ★ FERRIES
DIESEL AND STEAM ENGINES ★ REPAIRS
ELSINORE TURBOCHARGERS FOR DIESEL ENGINES

ELSINORE SHIPBUILDING AND ENGINEERING CO. LTD.

Telephone : ELSINORE 21 14 00

Telegrams : SHIPBUILDING

ELSINORE • DENMARK



Portuguese Liner "Funchal"

LARGEST PASSENGER LINER YET BUILT IN DENMARK

WORK is progressing on the new Portuguese passenger liner *Funchal*, 9,500 grt, which is under construction at the Elsinore Shipbuilding & Engineering Co Ltd. This ship, which was launched in February, is intended for the regular passenger and cargo service between Lisbon and Madeira and/or the Azores which operates throughout the year, and will relieve the well-known passenger ship *Lima* now operating on the Lisbon-Azores-Madeira route. The new ship may also be used for cruises to Madeira and into the Mediterranean.

The *Funchal* is noteworthy not only because she is the largest passenger vessel yet to be built in Denmark, and the largest ship yet launched at the Elsinore shipyard; but also because she is to be powered by Parsons steam turbines and is one of the first Danish ships to be supplied with British propelling machinery. This type of machinery was preferred by the owners, Empresa Insulana de Navegacao, because it operates silently and without vibration.

The principal particulars of the *Funchal* are as follows:

| | |
|------------------------------|------------|
| Length o.a. | 500ft 9½in |
| Breadth moulded | 62ft 6in |
| Depth to promenade deck | 47ft 1in |
| Depth to A deck | 30ft 0¼in |
| Depth to B deck | 21ft 0¾in |
| Depth to C deck | 14ft |
| Draught | 20ft 2½in |
| Gross tonnage | 9,500 tons |
| Machinery output | 14,000 hp |
| Speed | 21½ knots |

The *Funchal* will have two cargo hatches forward and two aft and a total of ten 3-tons derricks. There are eight watertight bulkheads and a double bottom. Wing tanks for the carriage of 500 tons of fuel oil and 570 tons of fresh water will be built in, and in the forepart of the ship there will be space in the holds for 50 cars and also refrigerated chambers.

Stabilisers

Stabilisers will be fitted in order to give passengers the maximum degree of comfort, and air conditioning

will be installed throughout. The *Funchal* will carry about 500 passengers, first and tourist-class, and accommodation has been provided for 66 officers and crew and a catering staff of 142. The latter figure will give some idea of the luxury which the passengers will enjoy during their stay on board.

Large comfortable saloons will be provided and there will be snug bars and room for dancing. Special consideration has been given to the entertainment of children on board and playrooms have been provided for their amusement. There will be ladies' and gentlemen's hair-dressing saloons and all cabins will have a bath room.

Propelling Machinery

The propelling machinery will consist of two sets of steam turbines ordered from the Parsons Marine Turbine Co Ltd, each set comprising one ahead HP turbine of all impulse type and one LP turbine of single-flow mixed impulse and reaction type. The total output of the two shafts is 14,000 hp. The boilers are being built under licence from Babcock & Wilcox Ltd.

The *Funchal* is, in addition to a large number of car and train ferries, the tenth passenger vessel to be built by the Elsinore shipyard since the war. Among these are the *Venus*, which runs between Bergen and Newcastle; the *Aallotar*, running between Stockholm and Helsingfors; the *Prinsesse Margrethe*, *Kronprins Frederik* and *Kronprinsesse Ingrid*.

MARINENS HOVEDVERFT, Horten, Norway, have completed an arrangement with Sulzer Brothers for the production of their motors on licence. MHV are already licensees for Doxford and GV engines. The first orders have already been received for Sulzer engines, including one of 20,000 hp.

FIVE HUNDRED AND EIGHTY-THREE SHIPS entered the Port of Hong Kong during April. According to statistics, 250 of the ships entering were of British registry, while 244 ships flying the British flag were among the 570 vessels cleared in the same period. A total of 508,965 dwt of commercial cargo was discharged and 192,705 dwt loaded.

Shipping and Shipbuilding in Finland

UPWARD TRENDS IN TRADE AND TONNAGE

By THE SHIPPING WORLD'S Own Correspondent

AT THE end of last year Finnish shipowners had some reason to be satisfied. The merchant navy of Finland was no longer decreasing, and the previous shrinkage had been replaced by a reasonable expansion of tonnage. Instead of about 32,000 tons lying idle at the beginning of the year all vessels were practically fully employed. The annual report of the Shipowners' Association of Finland for 1960 also mentions the fortunate absence of labour disturbances and the increased competitive strength of the fleet as a result of the acquisition of new tonnage, and the purchase of good secondhand vessels. Twenty-one motor vessels aggregating 81,983 grt had been added to the merchant fleet, which at the beginning of 1961 totalled 512 vessels of 800,716 grt. Ten of the above vessels, recently acquired, were built in Finland; while 91,156 grt were bought secondhand abroad during 1960. Steamships are continually being replaced by motorships. Whereas 55.1 per cent of the total tonnage was motor-driven at the beginning of 1960, the percentage is now 59.7.

The fact that Finnish shipyards are able to compete successfully with foreign shipbuilders is another ground for satisfaction among Finnish shipowners and shipbuilders alike. Seven vessels are being built for the Swedish Broström concern. Crichton-Vulcan has built or is building about 63,000 tons for this concern. In competition with foreign shipowners the Sandviken shipyard has built the most modern car ferry on the Baltic, the *Skandia*. The series of four vessels building at Valmet was won against severe foreign competition. Rauma-Repola recently secured the order for building of a tanker of 15,000 dwt, and the series of "paraglyph" vessels now being built by Laivateollisuus, at Åbo, were secured in hard competition with Finnish as well as foreign shipyards.

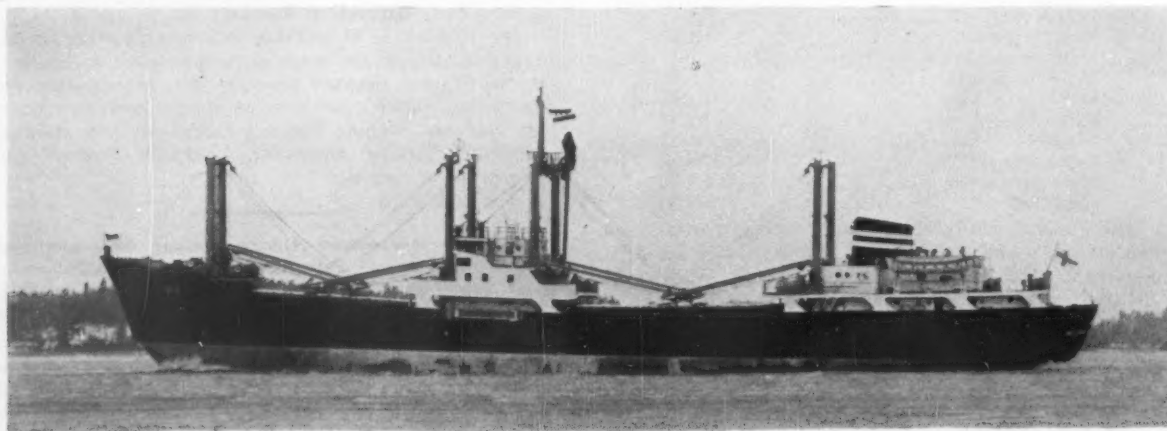
The Finland Steamship Co Ltd has a fleet of 55 vessels, aggregating 132,763 dwt, excluding vessels of the affiliate Finland South America Line Ltd, A/B Turret and Oceanfart A/B. It is by far the largest shipping company in Finland. The annual report for 1960 showed a profit of

FM100,997,055, although a difficult winter and strikes in Antwerp and London led to considerable increases in the running expenses. Five new vessels (the *Taurus* and *Tellus* delivered by Rauma-Repola, the *Arcturus* and *Baltic* built at Crichton-Vulcan, and the *Inha* from the Pansio (Valmet) shipyard) were added to the fleet.

In view of the remarkable increase of Finnish exports of forest produce, which may reach a peak in 1962, the company has eight vessels of 2,200/3,000 dwt on order for delivery in 1961 and 1962. Rauma-Repola is building two and Crichton-Vulcan at Åbo six of these vessels. This new building programme, which together with earlier additions and orders includes 19 vessels, is the largest ever of the Finland Steamship Co Ltd and it has been made possible by means of the long-term credits granted, which run to 1970.

Hydrofoil Craft in Service

The *Oihonna*, built in 1898 by Gourley Brothers, Dundee, which maintained the passenger service between Finland and Sweden with such success, is among the old steamers sold for scrapping. A notable increase in passenger traffic to and from Sweden is mentioned in the report. The pool services together carried a record of 346,242 passengers in 1960. The new hydrofoil vessel *Sirena* has been operating successfully four times daily between Stockholm and Mariehamn and transported 12,896 passengers during the period June 28 to May 31. Later the vessel was operating between Malmö and Copenhagen. Technically this type of vessel has proved up to expectations and there was no interruption in traffic owing to bad weather. In order to rationalise the regular services under the Finnish flag, Oy Finn Lines Ltd and the Finland Steamship Co Ltd have reached an agreement whereby the latter company discontinues the service between Finland and the East Coast of U.S.A. and Finn Line no longer operates between Hull and Finland. The traffic between London and Finland is, however, operated in a pool with Oy Finn Lines Ltd and the United Baltic Corporation Ltd, London.



The cargo vessel "Inia", 2,161 dwt, built by Valmet OY for Finska Angfartygs A/B. Length overall 291ft, breadth 42ft

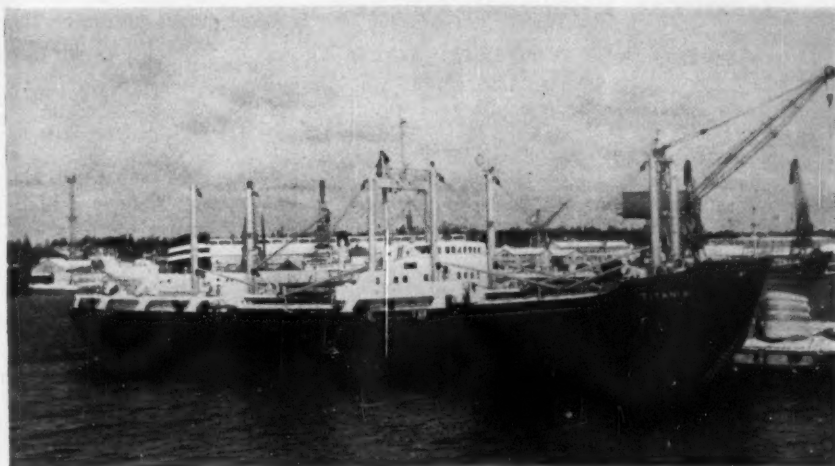
Scandinavian Shipping and Shipbuilding

The new tanker *Pronto*, 19,000 dwt, delivered to the affiliate A/B Turret by Verolme United Shipyards in Holland, is the largest vessel in Finland and is now employed between the Black Sea and home ports. A/B Siljarederiet, in which the Finland Steamship Co Ltd also has interests, will receive a sister ship to the *Skandia* in April 1962. Together both vessels will ply Abo-Noortälje with one service daily in each direction.

With the delivery of the new salvage steamer *Meteor*, 340 grt and 1,200 ihp, to the Finska Bergningsaktiebolaget Neptun, the Finland Steamship concern now has four salvage steamers stationed in the Gulf of Finland and the Gulf of Bothnia.

Against the background of this expansion there are many in Finland who raise the problem of the need for small vessels for tramp shipping in the Baltic. German and Dutch coasters now dominate about 90 per cent of the export of sawn goods and a Finnish fleet of coasters will be a valuable supplement to the expanding line traffic with large vessels. A step forward has been taken with the passing on April 5 of the law stipulating tax relief for the small-sized vessels. The new law is an improvement on earlier proposals. Shipping companies are now included among those entitled to tax relief and the age limit of the vessels concerned has been raised from 5 to 10 years. Although the credit problem for minor shipping companies is not yet satisfactorily resolved, the law is expected to have a stimulating effect on those who contemplate building or importing vessels of less than 1,200 grt.

The need for small units for the transport of timber is the more strongly felt as the importing countries no longer store timber to so great an extent, preferring to



Motor cargo ship "Titania", 2,161 dwt, built by Rau-ma-Repola O.Y. for Finska Angfartygs A/B

buy smaller shipments. This trend has given the coasters a better chance to compete successfully with the conventional carriers of about 3,000 grt. Shipowners, however, are a bit disappointed that the age limit for secondhand vessels purchased within the framework of the tax relief stipulations could not be raised to 12 years, as vessels on the eve of their third survey are 55 to 60 per cent cheaper than new ones. Also the manning regulations are reported to leave much to be desired before they are fully appropriate to the needs of small tonnage.

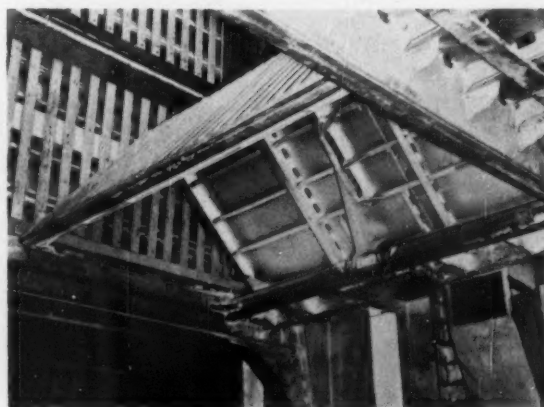
A remarkable rise in exports has taken place in Finland during the last two years, reaching 10 mn tons in 1960. Imports are also soaring and last year a record of 8.95 mn tons was noted. This means that practically all Finnish ports have to be developed to meet the requirements of the increasing traffic. Investments in ports are expected to rise to FM1.7 milliard during 1961 and to about FM2 milliard for 1962. The exporting ports are unable to raise the necessary funds themselves and the Government has budgeted FM500 mn for loans to port authorities.

HATCH OPERATING MECHANISM**Hydraulic Torque Actuator**

A NEW product being manufactured by Karlstads Mekaniska Verkstad, Sweden, inventors of the well-known KaMeWa propeller, is a hydraulic torque actuator for opening and closing hatch covers. The actuator is mounted on the lower edge of the hatch coaming and operates the hatch by means of a lever (which can be seen in the accompanying illustration). The equipment comprises the actuator, which performs the opening and closing operations; a pumping unit, and a control panel from which the actuator is operated and which is usually fitted to each hatch.

Actuators for one or more hatches may be connected to the same hydraulic system by means of a distribution valve. In the event of damage to the hydraulic lines a check valve holds the hatch in the open position. It takes about 60 seconds to open a hatch cover, and the maximum opening angle for both single and split hatch covers is 90 degrees. The actuators are being manufactured for stock in 10, 20, and 30 ton-metre sizes. The working pressure is 1,420 lb/sq ft. The design has been rigorously tested in service for some considerable time, units of the smallest size being installed in all five *Rio* class vessels owned by A/B Nordstjernan (Johnson Line) of Stockholm. Initially, all equipment will be manufactured in Sweden.

Boving & Co Ltd, Villiers House, Strand, London WC2, are the suppliers in the United Kingdom and Commonwealth, with the exception of Canada.



View showing the actuator and lever arm

Scandinavian Shipping and Shipbuilding

General Purpose Tanker from Norwegian Yard

Seventh of Series from Bergens M.V.

THE NORWEGIAN shipyard A/S Bergens Mekaniske Verksteder builds a standard general purpose tanker of about 19,500 tons deadweight. The latest of this type to be built is the *Jonwi*, which was completed a few months ago for a local owner, Kommandittelskapet Harwi (Rolf Wigand), of Bergen. She has been chartered to Shell Tankers for 10 years.

The principal particulars of the *Jonwi* are as follows:

| | |
|-----------------------|-------------|
| Length o.a. | 556ft 10in |
| Length b.p. | 525ft |
| Breadth moulded | 71ft 10in |
| Depth moulded | 40ft 1in |
| Draught (summer) | 30ft 10in |
| Tonnage: | |
| Deadweight | 19,610 tons |
| Gross | 12,416 tons |
| Net | 7,681 tons |

The ship was launched on February 2, and delivered to her owners on April 15. On loaded trials she achieved a speed of 15.76 knots at engine revolutions of 120 rpm. Her service speed is designed to be 15½ knots at 9,100 bhp, which the main engine develops at 119 rpm.

In its general design the vessel is typical of current Scandinavian practice. The hull is all-welded, with rounded gunwale over the parallel midbody of the ship, the bridge is amidships, and the machinery of course aft. Longitudinal framing is used over the length of the cargo spaces, with transverse framing at the ends. There are two longitudinal and 11 transverse corrugated bulkheads which divide the cargo space into 10 centre and 18 wing tanks (the pair of wing tanks apparently missing is accounted for by the combining into a single tank of the wing spaces on either side abreast Nos 1 and 2 centre tanks).

There is no pump room immediately forward of the engine room. Instead there are two, arranged between centre tanks 2 and 3, and 6 and 7 respectively, dividing

the tanks into three groups for the handling of different grades of cargo. The capacities of the cargo and other tanks are as follows:

| | |
|--------------------------|---------------|
| Cargo tanks | 935,087 cu ft |
| Dry cargo hold | 22,944 cu ft |
| Bunker tanks | 1,461 tons |
| Water ballast tanks | 876 tons |

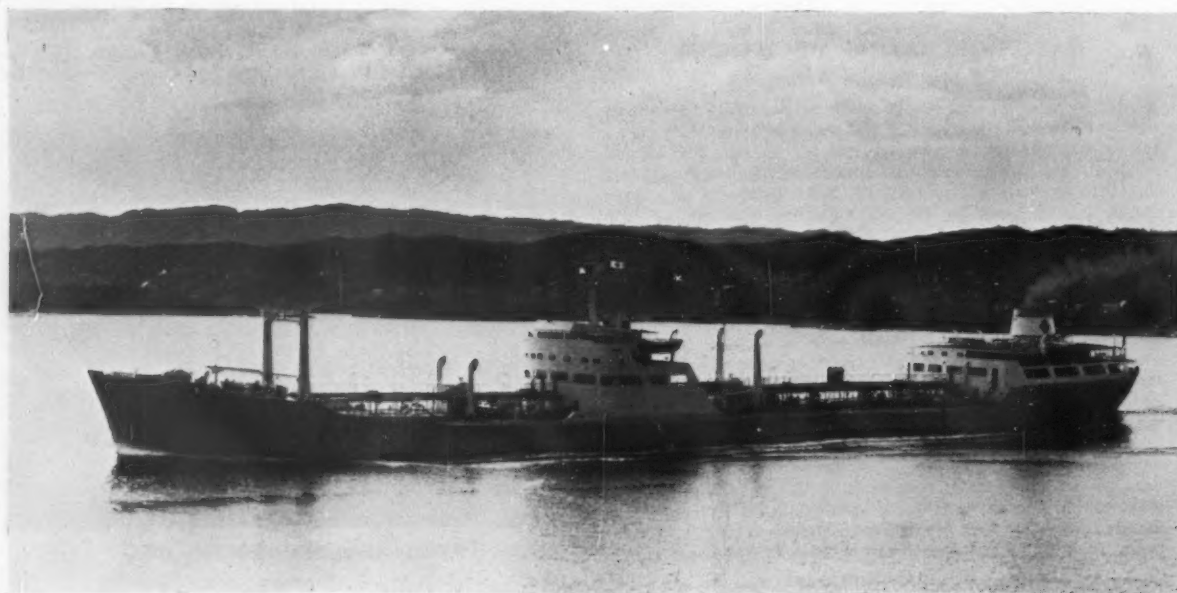
In the cargo spaces there is installed a 12-in cast iron ring pipeline with cross-overs in the centre tanks. In each tank there is a 10-in suction pipe connected to the ring pipeline of the cross-overs.

In the pump rooms there are four vertical compound cargo pumps with a total capacity of 2,040 tons per hour, and in addition there are two 150-tons vertical duplex stripping pumps, all steam driven. Heating coils are installed in all cargo tanks, and comprise about 19,800ft of aluminium-brass pipes.

All accommodation is fully air-conditioned, with electric heating units in all living rooms and with individual control of temperature and air volume. The walls between the crew's recreation room and the petty officers' lounge and between the petty officers' and officers lounge are of the folding door type, so that a large space is available for film shows etc.

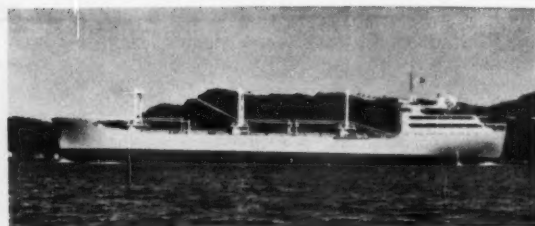
The deck machinery, which was delivered by the Norwinch group, is hydraulically-driven and comprises one 24-tons windlass, one 11-tons and two 6-tons warping winches. The electro-hydraulic steering gear was supplied by John Hastie & Co Ltd. Lifesaving equipment consists of four glass-fibre lifeboats, two equipped with engines, and two rafts. Navigational equipment is mainly Scandinavian or German, but includes a gyro compass from S. G. Brown. The main engine is a single-acting turbocharged two-stroke Sulzer diesel engine, type 7 RD 76/155, developing 9,100 bhp at 119 rpm. The cylinder diameter is 760mm and the stroke 1,550mm. The engine is designed for operating on heavy fuel oil. It was supplied by Sulzer Brothers from the Winterthur works.

The auxiliary engines are of the yard's own manufacture, two four-stroke turbocharged six-cylinder Bergen diesel engines type RIG6. Each engine develops 450 bhp at 514 rpm and is directly coupled to a 375-kVA alternator, 3 by 440 volts, 60 cycles, 514 rpm. There is also a 100-kW steam driven generator.



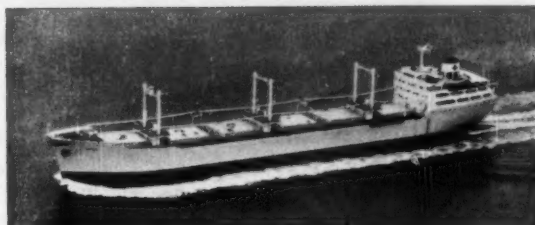
THESE BMV SHIPS
FOR ROLF WIGAND

"HILWI"



Delivered 27.5.1959.
Equipped with three
RTGS BERGEN DIESELS
— each developing
375 b.h.p at 514 r.p.m.
Corresponding
generating effect 312
kVA A.C. The ship has
NORWINCH hydraulic
deck machinery.

"GERWI"



Delivered 21.6.1960
Equipped with three
RTGS BERGEN DIESELS
— each developing
375 b.h.p. at 514 r.p.m.
Corresponding
generating effect 312
kVA A.C. The ship has
NORWINCH hydraulic
deck machinery.

and now
"JONWI"



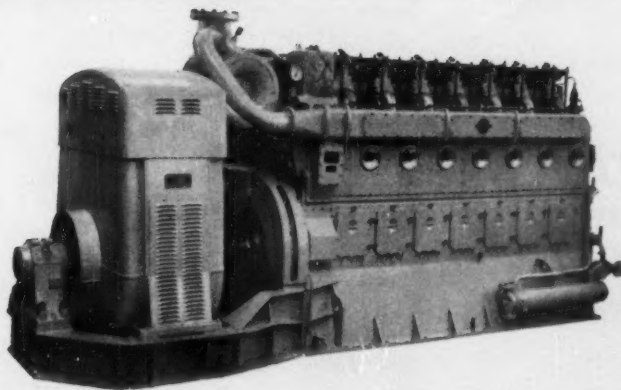
Also equipped with
BERGEN DIESELS
— two RTG6 — 450
b.h.p. each at 514 r.p.m.
Corresponding
generating effect 375
kVA A.C.
M/T "JONWI" has also
NORWINCH hydraulic
deck machinery.

are among the 242 ships with

BERGEN DIESEL AUXILIARIES



Four stroke generating sets are
manufactured for AC or DC,
capacities ranging from 110
kW to 300 kW at 500 r.p.m.
Turbo-charged Diesel engines
are delivered for capacities up
to 425 kW.



A.S BERGENS MEKANISKE VERKSTEDER

ENGINE PRODUCTION SECTION - BERGEN - NORWAY

Telephone: 98140. Telegrams: BERGENDIESEL. Telex: 2133

**Polar icebreaker
"MOSKVA"**

the biggest diesel-
electric icebreaker
in the world, built
for V/O Sudoimport
U.S.S.R.



Main dimensions :

| | | |
|---------|---|----------|
| Length | = | 122,1 m |
| Breadth | = | 24,5 m |
| Draught | = | 10,5 m |
| S.H.P. | = | 22.000 |
| Speed | = | 18 knots |
| Screws | = | 3 |

Our programme includes :

Newbuilding of :

Icebreakers
Car and passenger ferries
Passenger ships
Cable ships
and other special ships

Ship repairs as :

Engine overhauls
Dockings
Accommodation work
Hull repairs a.o.
Drydock : 142 m x 20 m x 6,6 m
Floating dock : Lift cap. 2750 tons

WÄRTSILÄ-KONCERNEN A/B

**Sandvikens Skeppsdocka
HELSINKI — FINLAND**

OWNERS' BROKERS IN FINLAND



Own houses at:

HELSINKI (Head-office) - HAMINA - KOTKA - VALKO/WALKOM - HANKO - TURKU/ABO - MÄNTYLUOTO

Shipbrokers & Chartering Agents

VÄSTERÅS SWEDEN'S LARGEST INLAND PORT

The centre for economic transport

*Direct regular lines to and from
most European ports*

**SERVICES TO AND FROM TYNE, HULL AND
FELIXSTOWE HAVE BEEN OPENED DURING 1961**



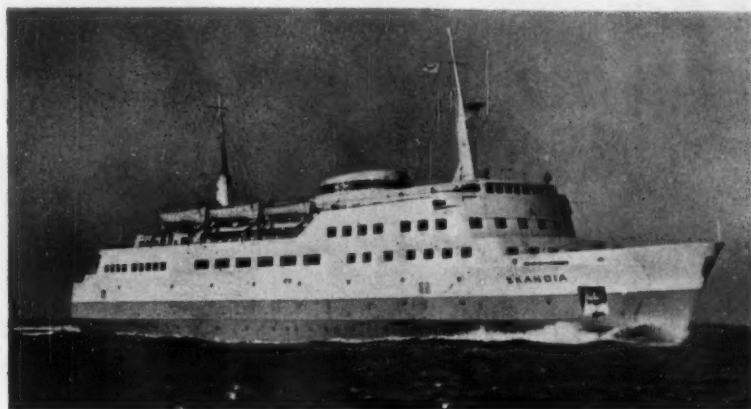
VÄSTERÅS STAD

Västerås hamn



Car and Passenger Ferry "Skandia"

NEW VESSEL FROM
FINNISH SHIPYARD



THE FIRST car and passenger ferry of any great size to be built in Finland has now entered service and is running between Turku, Mariehamn and Norrtälje, linking Sweden with Finland in about nine hours. This vessel, the *Skandia*, 3,594 grt, has been built by Wärtsilä-konsernen AB, Sandvikens Skeppsdocka, Helsinki, for the Silja Shipping Company, Turku, Finland. Although the new ferry has a speed of 18 knots the passage still takes nine hours, and this was considered long enough to warrant her being equipped with various amenities such as a cinema, hairdressing saloons, Sauna baths and a nursery and children's playroom.

The propelling machinery consists of twin diesel engines, and in order to improve her manoeuvrability the *Skandia* has been equipped with a transverse bow propeller. The keel of this ship was laid on 18 May 1960, she was launched on 10 May 1961 and delivered on May 28.

The *Skandia* has been built to Lloyd's Register class 100 A1 and ice-strengthened according to the latest requirements of the Finnish ice class IA. She naturally also complies with the International Convention of Safety of Life at Sea 1948, as well as with the International Convention for the Prevention of Pollution of Sea by Oil 1954, and to current Finnish rules. The hull is com-

The principal particulars of the *Skandia* are as follows:

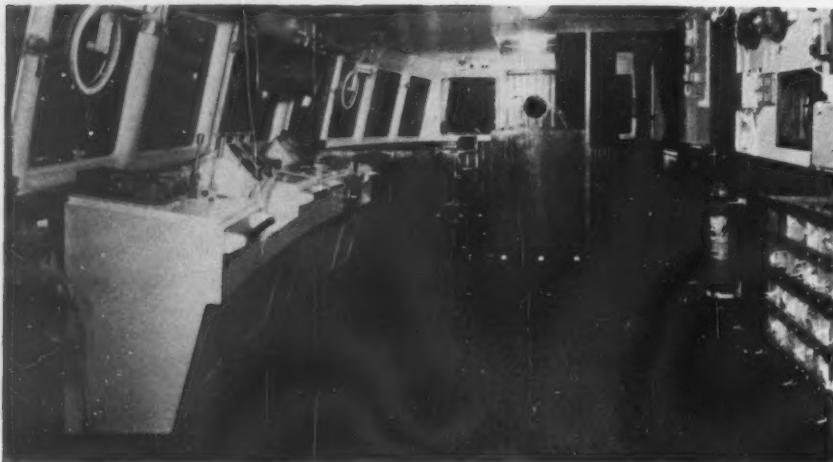
| | | | |
|------------------|-----|-----|------------|
| Length o.a. | ... | ... | 333ft 4in |
| Breadth | ... | ... | 60ft 9in |
| Draught | ... | ... | 15ft 1in |
| Gross tonnage | ... | ... | 3,594 tons |
| Net tonnage | ... | ... | 1,298 tons |
| Displacement | ... | ... | 4,000 tons |
| Machinery output | ... | ... | 6,600 shp |
| Service speed | ... | ... | 18 knots |
| Passengers | ... | ... | 1,100 |
| Motor cars | ... | ... | 175 |
| Cars and lorries | ... | ... | 100/20 |

pletely welded and divided into 11 watertight compartments allowing two adjacent compartments to be flooded without risking the safety of the vessel. All W/T bulkheads have electrohydraulically-operated sliding doors.

The *Skandia* is operated as a one-class ship, but passengers may choose between a self-service cafeteria and full dining room service. She has a spacious smoking saloon with bar, entrance-hall, lounges and deck café. The verandah decks are equipped with adjustable aircraft type chairs and big windows. The funnel acts as an "observation lounge," the exhaust pipes being incorporated in the mainmast. There are also various shops



The car deck of the "Skandia", showing the raised side decks where a second tier of cars can be carried. The detachable parts of the upper car deck can be seen beneath the deckhead

Scandinavian Shipping and Shipbuilding

The wheelhouse has a console with a position for the helmsman to starboard, and for the officer of the watch to port

summer and winter traffic. Thus the capacity of the vessel may either be adjusted for a large number of small cars and a more limited number of buses and lorries, or the reverse.

The main machinery consists of two Wärtsilä-Sulzer diesel engines type 9 MD 51, each directly coupled to its shaft carrying a variable-pitch propeller of KaMeWa design. Each motor develops 3,300 shp at 300 rpm which gives a speed of 18 knots.

The propeller pitch is directly controlled from the wheelhouse, bridge wings and after bridge. The speed of the diesels (300, 250 or 200 rpm) is set by engine room staff according to signals from the wheelhouse. The ferry has also a transverse bow propeller with variable pitch. This is powered by a 400-hp electric motor and gives a transverse thrust of about 4.8 tons. All manœuvring is controlled from the wheelhouse. Auxiliary power is obtained from four Wärtsilä-614 type four-stroke diesels each developing 300 shp at 600 rpm. The generators develop 250 kVA. The voltage is 380 volts, 3-phase, 50 cycles and for lighting 110 volts 50 cycles. If the power drops by more than 15 per cent an emergency diesel generator automatically starts supplying essentials and about 100 lights with current.

where passengers can buy tax-free goods. Some of the passenger cabins can easily be converted from day rooms to bedrooms.

The car space extends all fore and aft, and the cars are driven through the ship and out at the other end without having to turn round. The ferry has only a narrow machinery casing dividing the rows of cars and buses. Cars are carried at two levels, buses and lorries on B deck only. The car platforms are partly detachable for complying with the different requirements of

1. The self-service cafeteria
2. The dining saloon is an alternative to the cafeteria
3. Smoking saloon. The bar is in the far corner
4. Aircraft-type seats in the verandah



2



3



4

The Tanker "Sea Serpent"

VESSEL WITH LARGE-BORE GÖTAVERKEN DIESEL ENGINE

THE FIRST ship to be powered by the new 850-mm bore Götaverken diesel engine has been handed over to her owners Salénrederierna A/B, Stockholm, by the builders, Oresundsvarvet A/B, Landskrona, Sweden. This vessel, the *Sea Serpent*, 40,200 dwt, gave an excellent performance on sea trials, when she attained a mean speed of 17.45 knots on full ballast load. During the entire trial there was no evidence of vibration and the ship ran smoothly at various engine speeds. The engine, which was described fully in THE SHIPPING WORLD of 30 November 1960, after it had been seen running on the test bed, has ten cylinders of 850mm bore with a stroke of 1,700mm, and was designed for an output of 2,100 bhp per cylinder.

In recent years Götaverken A/B and its subsidiary company Oresundsvarvet A/B have built a number of tankers of the same size as the *Sea Serpent*, but with different methods of propulsion. Among these are the *Havkong* and *Soya Maria*, both steam turbine vessels, the latter being powered by main turbines built by Parsons Marine Turbine Co Ltd (SW, 25.1.61); the *Sven Salén*, which has twin Götaverken diesel engines driving two screws and developing together 20,000 bhp (SW, 22.10.58); and the *Harry Trapp* and *Varenna*. These last-mentioned ships have diesel engines with twin screws and also twin rudders (SW, 26.10.60), an unusual arrangement in large tankers but one chosen with the object of improving manoeuvrability in narrow waters, such as the Suez Canal. The *Sea Serpent* has been chartered to Esso AG, Germany, for a period of six years.

Hull Construction

The hull is of completely welded construction with longitudinal framing in the deck, bottom and sides; the frames in the sides being of flanged plate and those in the deck and bottom of flat plate used in conjunction with heavy girders. Both the longitudinal and trans-



The captain's dayroom and dining saloon

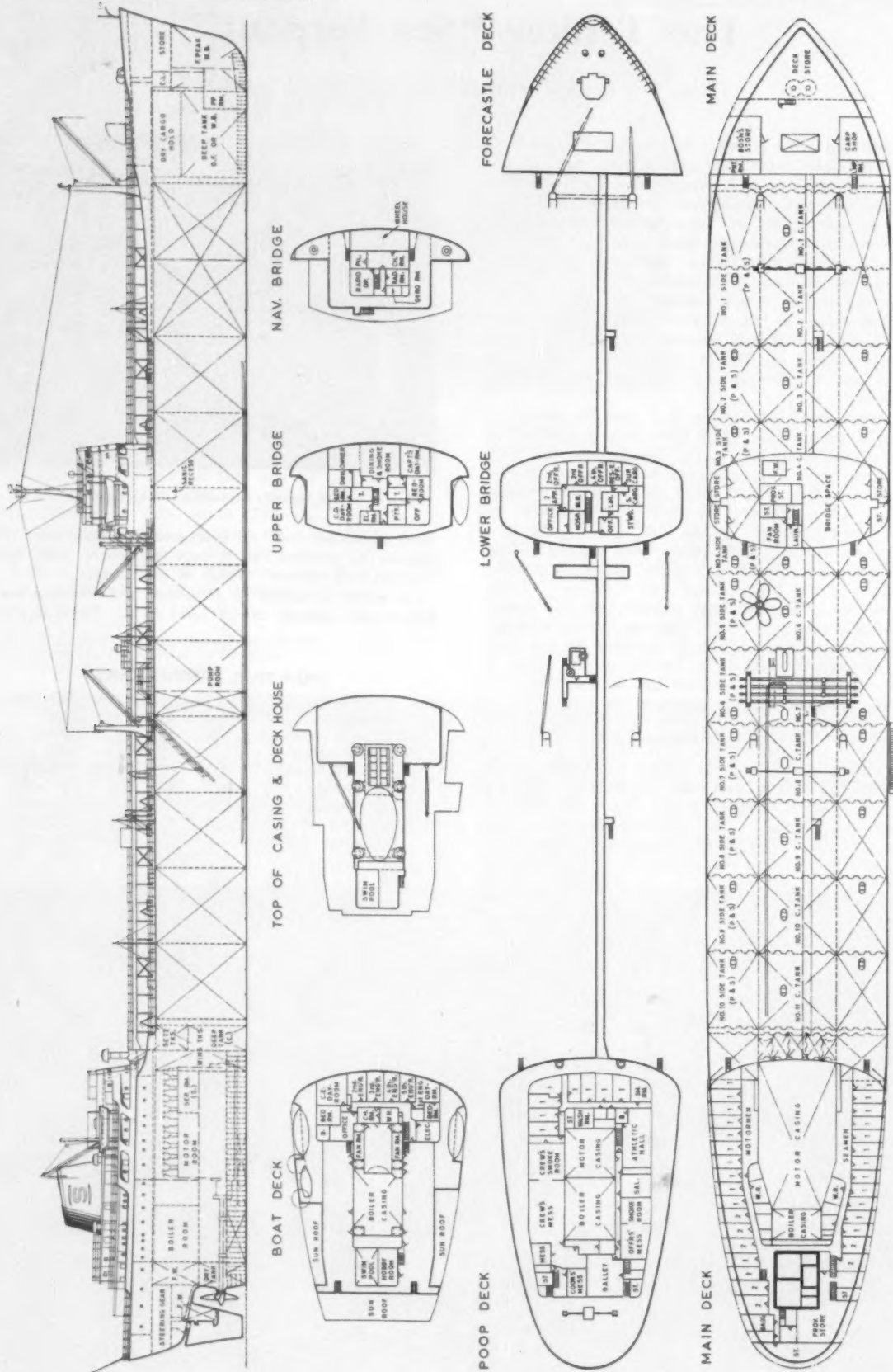
verse bulkheads are of corrugated construction. The gunwale is rounded, as is now customary with Scandinavian-built tankers. There is no riveting.

Oil cargo is carried in 11 centre and 20 wing tanks with a total capacity of 1,915,065 cu ft. There is a dry

PRINCIPAL PARTICULARS

| | |
|------------------------|-----------------|
| Length o.a. ... | 700ft 2in |
| Length b.p. ... | 670ft |
| Breadth, moulded ... | 96ft |
| Depth, moulded ... | 48ft |
| Draught, summer ... | 35ft 10½in |
| Deadweight ... | 40,200 tons |
| Machinery output ... | 18,350 shp |
| Contract speed ... | 16.2 knots |
| Oil cargo capacity ... | 1,915,065 cu ft |





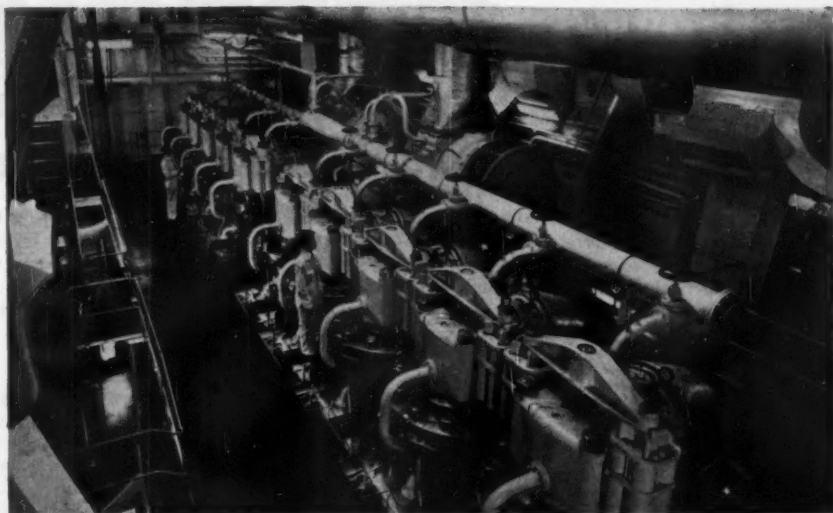
The oil tanker "Sea Serpent," 40,200 dwt, built by Oresundsvarvet, Landskrona, Sweden, for Salénrederierna, Stockholm

Scandinavian Shipping and Shipbuilding

cargo hold forward having a bale capacity of 45,747 cu ft. The pump room, which is located amidships, contains two Drysdale centrifugal pumps driven by Weir steam turbines and two Eureka vertical reciprocating pumps. The condenser in the pump room is supplied with circulating water by a Reader steam engine-driven pump. The total pumping capacity is 4,000 tons/hour (water). Heating coils have been fitted in all cargo oil tanks.

The *Sea Serpent* has been fitted with a Golar Vent Dry rapid gas-freeing system supplied by F. A. Hughes & Co Ltd, London (SW, 18.3.59). This system is designed for operation by one man. The turbo fan unit situated in the pump room has sufficient capacity to effect $9\frac{1}{2}$ -10 complete changes of tank atmosphere/hour even in the tanks furthest from the pump room. Such an air flow ensures extremely rapid gas freeing under all service conditions irrespective of the weather at the time of carrying out the operation. A unique feature of Golar Vent installations is the inclusion of a heater unit in the fan discharge circuit. This enables a temperature rise of 200 deg F above ambient to be achieved, ensuring adequate heating and consequent lowering of the S.G. of heavy gases which facilitates their displacement, as well as ensuring rapid cargo line and tank drying.

Navigational aids include Raytheon 10-cm true motion and conventional type radar, AEG steering, Plath gyro compass and Kelvin Hughes echo sounder. Trials were carried out using the Decca Navigator, SAL log and Götaverken Lodicator, an instrument made by AB Göta-



View looking on top platform of 10-cylinder 850-mm bore engine. Only two turbochargers are fitted to this size of engine

verken for measuring the load distribution, are also fitted. Chadburn telegraphs are fitted in the wheelhouse and engine room.

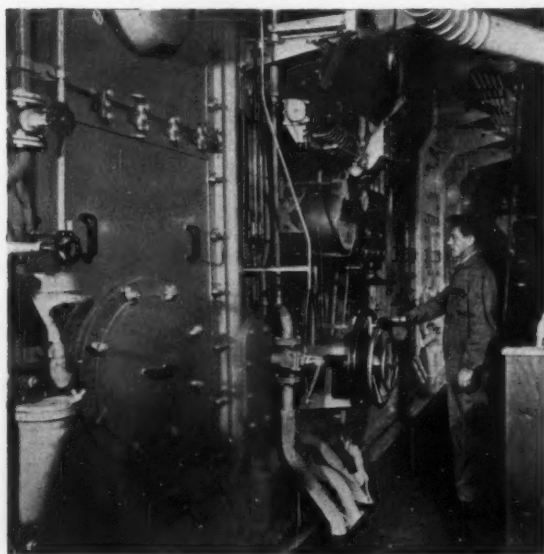
The *Sea Serpent*, as already mentioned, is the first ship to be powered by the new large-bore Götaverken diesel engine. This engine is a two-stroke single-acting cross-head unit having the following main particulars:

| | | |
|---------------------|-----|-----------------|
| No of cylinders | ... | 10 |
| Cylinder bore | ... | 850mm |
| Stroke | ... | 1,700mm |
| Piston mean speed | ... | 1,279.5ft/min |
| Output per cylinder | ... | 2,100 bhp |
| mip | ... | 138.64 lb/sq in |

As a prototype engine it was contracted at a very conservative rating with a mean indicated pressure of 8.8 kg/sq cm (125 lb/sq in) and an output of 18,350 bhp at 115 rpm. During shop trials the engine was tested at an mip of 9.75 kg/sq cm (138 lb/sq in) and at even higher pressures, and the output reached was as high as 23,000 bhp. In view of the results obtained, this large-bore engine will in future be rated at the higher mip, which corresponds with the maximum continuous output, so that with an output of 2,100 bhp per cylinder a twelve-cylinder engine could produce 23,500 bhp—sufficient for the propulsion of an oil tanker or ore carrier of about 70,000 dwt. With twin engines, sufficient power could be obtained to propel a ship of over 100,000 dwt.

During shop trials within the 100 to 115 rpm speed range, the fuel consumption was found to be mainly below 0.358 lb/bhp-hr. There are two turbochargers and these operate on the constant pressure system, with the blowers acting in series with reciprocating scavenging air pumps fitted to each cylinder. This system has proved the most suitable in enabling the high output and mean pressures per cylinder to be developed.

Electricity is supplied at 440 volts AC for power and 220 volts AC for lighting. The generating plant consists of two six-cylinder four-stroke single-acting Götaverken diesel engines, each of 380 bhp, each direct coupled to a 320-kVA 450-volts 60-cycles alternator, and one steam turbo-driven 435-kVA alternator. Steam for cargo heating and pumping etc. is supplied by two oil-fired Götaverken-Babcock & Wilcox boilers, each rated at 16 tons of saturated steam at 178 lb/sq in. There is also a Götaverken exhaust gas fired boiler having a heating surface of 3,770 sq ft.



Manoeuvring platform. Starting, reversing and fuel regulation are all controlled by a single handwheel

Progress At Eriksbergs Mek. Verkstads

DRYDOCK COMPLETED AND FLOATING DOCK UNDER CONSTRUCTION

AT THE Gothenburg shipyard of Eriksbergs Mek. Verkstads A/B, the new 100,000-tons dry dock has already been put to use and a floating dock having a lifting capacity of 30,000 tons is being built. The inauguration of the new dry dock in June 1960 coincided with the launching of the *Mobil Enterprise*, 50,700 dwt (SW, 19.4.61). This vessel was ordered by Mobil Tankships Ltd, Hamilton, and is the largest to be built for these owners and the largest yet built by Eriksbergs. Work on the dock gate, cranes, pumping plant etc was carried out while the vessel was being constructed.

The new dry dock will be used both for building and for repair purposes. The land for the site was acquired in 1957 and one-third of this land, which in all totalled 37 acres, was set aside for this purpose. It consisted largely of solid rock and 6 million cu ft of spoil have been removed. The keel of the *Mobil Enterprise* was laid in September 1959. The new Eriksberg dock is the only one of its kind in Sweden where ships up to 900ft in length and 100,000 dwt may be built or dry-docked. The new dry dock has the following main dimensions:—

| | |
|----------------------------------|-------|
| Length (inside) | 915ft |
| Breadth (inside) | 145ft |
| Depth (from ground level) | 38ft |
| Depth of water | 25ft |

The dock rests on solid rock, its sides being of reinforced concrete construction along which are run the crane tracks and the tunnels for piping and electric cable. The gate is of pontoon type and the top carries a roadway 18ft wide. Two electric pumps, each of 5,100 tons/hour capacity, empty the dock when flooded without a ship inside in 10 hours. The dock can be flooded when it contains no ship in about three hours.

The wood-topped concrete keel blocks are each designed for a load of 210 tons. The twelve pairs of bilge blocks are handled from capstans on the dock side. Two 12-tons electric warping winches are located at the in-

shore end of the dock: these, together with two 12-tons electric capstans at the gate end, are used not only for warping ships into the dock but also for the purpose of alignment.

There are two travelling luffing cranes on either side of the dock. The track breadth is about 46ft and the length of run about 1,000ft. The crane capacity is 60 tons at 107ft radius, 25 tons at 153ft radius and 7½ tons at 160ft radius. The height of lift from track to hook is 141ft.

New Floating Dock

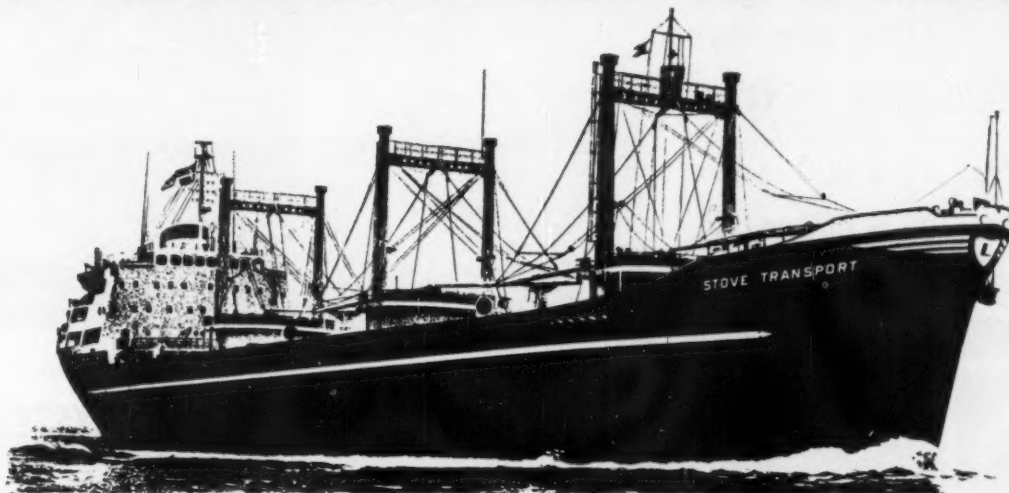
The new floating dock which is under construction will take ships of about 65,000 dwt, and when completed in 1962 will be the largest in Scandinavia. At present Eriksberg have three floating docks, but one of these, having a lifting capacity of 7,750 tons, has been sold to Langesunds Mek. Verksted, Norway, for delivery at the end of this year. The remaining two old docks were built by the yard itself, and after the completion of the new dock, the whole plant will consequently be of Eriksberg make.

The new dock will have a length of 220m, a breadth of 35m and a depth over the keel blocks of 10m. Cranage will consist of two 15-tons travelling luffing cranes, and nine electric centrifugal pumps, each with a capacity of 3,700 tons/hour, will be installed. The dock will also be equipped with two fire pumps with a manometric delivery height of about 90m each and a tank-testing pump delivering 750 tons/hour. Modern service installations for the supply of gas, compressed air, electric current and water will be provided.

On account of its dimensions, the new floating dock is being constructed and will be drydocked in the new building dock. It will therefore not be necessary to build it in pontoon units for the sake of making it self-docking. The dock is divided lengthwise into seven main tanks, each of which is divided crosswise into four smaller tanks.

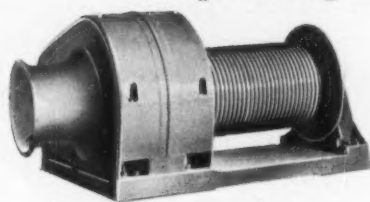


MODERN WINCH PRACTICE

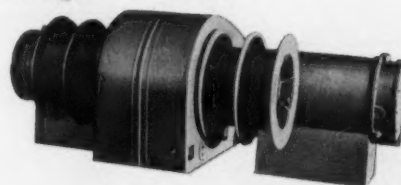


M/S "Stove Transport"

now in service with PUSNES special winches
powering her six Velle 'Ship Shape' cranes



Direct A.C. electr. driven
Cargo winch Type 8/3 EVIOsp
Capacity : 8t at 130 f/min.
3t at 345 f/min.



Direct A.C. electr. driven
Twin Winch Type 5EVTV
Capacity : 2 x 5t at 130 f/min.
Slewing & Topping winch.

More than 13000 units supplied to-date. Specialists in A.C. driven deck machinery. Makers of all sizes and types also Ward-Leonard or D.C. driven machinery. Also manufacturers of steam driven (piston engine or direct reversing turbine driven) deck machinery.

AKSJESELSKAPET
PUSNES
MEKANISKE VERKSTED
MANUFACTURERS OF DECK MACHINERY
ARENDAL - NORWAY

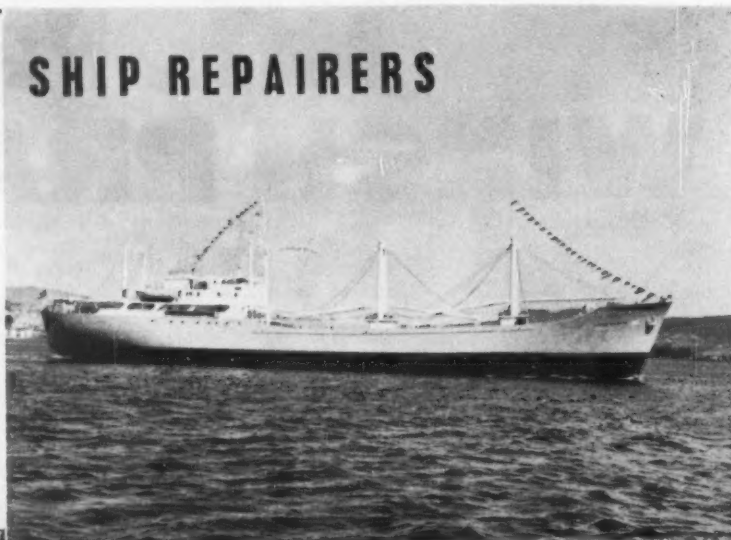
Sole Agents for the
United Kingdom and Eire:
Geesin & Read
Engineers
11, Fitzroy Place
Glasgow C.3.

SHIPBUILDERS & SHIP REPAIRERS

FLOATING DOCK
4,000 tons dw.
BUILDING BERTHS

No. 1. 3,000 t.dw.

No. 2. 9,000 t.dw.



m.s. "Hoegh Ailette" for Leif Hoegh & Co. A/S., Oslo.

DRAMMEN SLIP & VERKSTED

YNGVAR P. BERG & SÖNN

HAVNEGATEN 61-91 DRAMMEN NORWAY

Telephone:
DRAMMEN 833985 (Six lines)

Telegrams:
"DRAMMENSLIP"
Telex: 1422



THE HARBOUR of HÄLSINGBORG is one of Sweden's leading harbours with the greatest number of in- and outgoing ships. It is an important ferry harbour for goods, cars and tourists as well as an import- and export-harbour for the south of Sweden.

The harbour of HÄLSINGBORG, planned for an increasing market, has now been enlarged with three new harbour basins with a water depth of 8-11 metres and a ground of 400,000 square metres for handling and storing oils and other goods.

THE PORT OF HÄLSINGBORG

Rederi AB Norden i Norrköping

LICENSED SHIPBROKERS
LINER - CHARTERING
AND INSURANCE AGENTS

Tel. Address "Nordenbolag—Norrköping"

Telex 64042

TL. 21 899, 23 999

Offices: 30 Fleminggatan, Norrköping

FREDRIKSTAD



FOR IMPORT AND EXPORT
OSLO — HALDEN RANGE

AKSJESELSKAPET TRAFIK

FORWARDING AGENTS
Teleph. : 2985 — Cables : Trafik

NAKSKOV SKIBSVÆRFT

(NAKSKOV SHIPYARD LTD.)

NAKSKOV • DENMARK

SHIPBUILDERS • SHIPREPAIRERS

M/T NAKSKOV

18.360 TONS DW • SPEED 16 KNOTS

built for THE EAST ASIATIC COMPANY, LTD.,
COPENHAGEN



M/F PRINS BERTIL

delivered to A/B Bonnierföretagen, Sweden

built by

AARHUS FLYDEDOK OG MASKINKOMPAGNI A/s

AARHUS - DENMARK



Shipbuilders, Ship- Engine- and Boilerrepairers. Telegrams: Flydedokken Aarhus. Telex 4262

J. LAURITZEN'S SUCCR.

*Shipbrokers—
Chartering Agents*

**ESBJERG
DENMARK**

Telephone: 3,3004,3005,3006

Telegrams: "Lauritzen"

Telex: 3355

The Harbour of Trondheim

is located in the centre of Norway and is the natural port to the northern parts of Norway and Sweden.

The harbour is equipped with modern facilities. It is designed to permit the maximum efficiency in cargo handling . . . features which mean your cargo is handled faster, more efficiently and at less cost to you . . .

Numerous cranes permit rapid loading and unloading from either rail cars, trucks or ships . . .



Trondheim harbour has 26,670 feet of quays
and

ca. 2 mill. sq. ft. pier sheds

3 coolhouses are located on the waterfront



M/S "Santos" — 9,000 tons d.w.

delivered to the Rederiaktiebolaget Nordstjernan, Stockholm, Sweden

SHIPBUILDERS

ENGINEERS

REPAIRERS

LINDHOLMEN
GOTHENBURG · SWEDEN

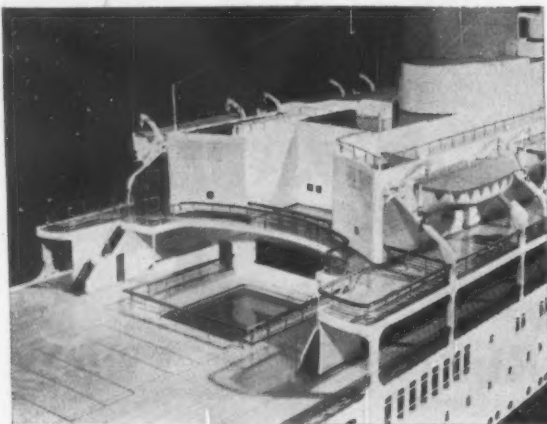
THE PORT OF LIVERPOOL

MODERN FACILITIES FOR
EVERY TYPE OF VESSEL
AND CARGO

PART OF THE NORTHERN SYSTEM
OF DOCKS AT LIVERPOOL

MERSEY DOCKS AND HARBOUR BOARD

DOCK OFFICE, LIVERPOOL, 3.



Model of Union Castle Liner "Windsor Castle," built to the order of Cammell Laird. Scale: $\frac{1}{4}$ " = 1'

IT'S PERFECTLY TRUE . . .

Every minute detail of this Bassett-Lowke Model is a precise replica of its life-size counterpart. The closer you look, the more you feel the very atmosphere of the craft. Bassett-Lowke undertake the reproduction in miniature of maritime models of all types: Full Hull, Waterline; and static models of Engine Rooms and interiors, etc. Our guarantee of Perfection in Miniature is that our Craftsmen *love* their work.

We shall be pleased to send Executives and Purchasing Agents and our illustrated catalogue (SM 52) "Models for Exhibition and Publicity." Enquiries to:—

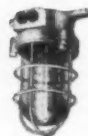
BASSETT-LOWKE LTD.

Head Office and Works: **NORTHAMPTON**

London Office: 112 High Holborn, W.C.1. Manchester: 23 Corporation Street

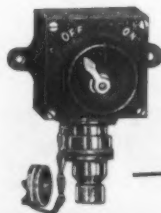
McGEOCH

LIGHTING FITTINGS
for
Engine Room, Deck
and Cabin



SWITCH and FUSE GEAR
and CONTROL CUBICLES

WATERTIGHT SWITCHES
SOCKETS and PLUGS



SHIPS' HARDWARE
in all metals and finishes

Registered

Est'd.  1832

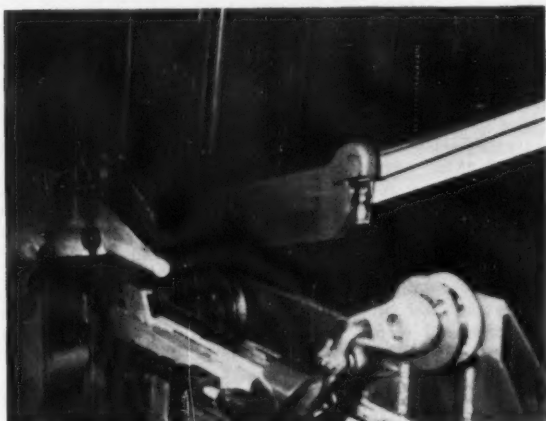
Trade Mark

WILLIAM McGEOCH & CO. LTD.
28 West Campbell Street, GLASGOW, W.C.2
Telephone: CEN. 7041. Telegrams: McGEOCH Glasgow
Works: BORDESLEY, BIRMINGHAM 10

New MacGregor Hatch Cover

THE "MAGRONEST" COVER AND "LIFT-LOCK" MECHANISM

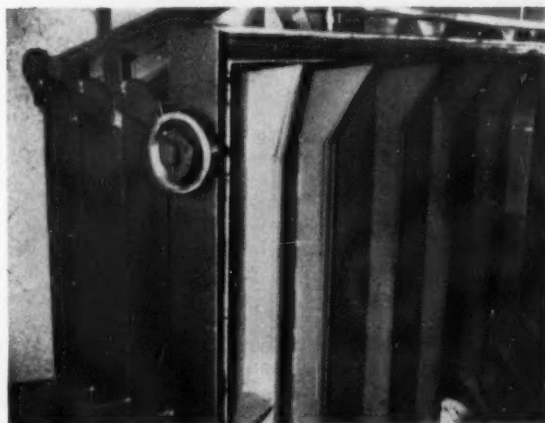
A NEW DESIGN of steel weatherdeck hatch cover has been developed by the International MacGregor Organisation. Known as the "Magronest," it is essentially a development of the well-known MacGregor single-pull design which is so widely used. The main feature of the design, as implicit in its name, is the fact that the covers are designed to nest within each other when the hatch is opened, thus reducing materially the length needed at the end of the hatch for their stowage. This can be a most useful point in ships where it is desired to extend the hatches over as much of the length of the holds as possible, but where restrictions on the height of hatch



A cover lifting as its upper wheels strike the ramps on either side

cover stowage (such as might be imposed by winch platforms) prevent the use of one of the hinging types of cover. As compared with the single-pull type, the Magronest cover saves about 25 per cent of the stowage length. In weight per area covered and in cost it is comparable with the single-pull cover.

In addition to this feature, the Magronest cover incorporates another new MacGregor development known as "Lift-Lock." This replaces the eccentrically-mounted wheels and the side cleats of the normal single-pull cover by an automatically-operated system which both makes the watertight seals on the hatches and also secures them. The normal transverse cleats have been replaced by another automatically-operated system, which will be described later, and so the whole operation of the covers can be effected with-

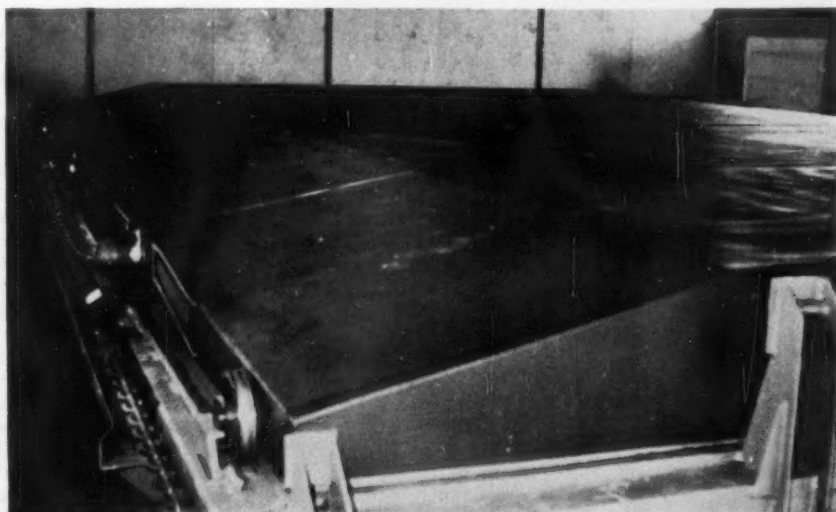


The set of four covers in the nested position

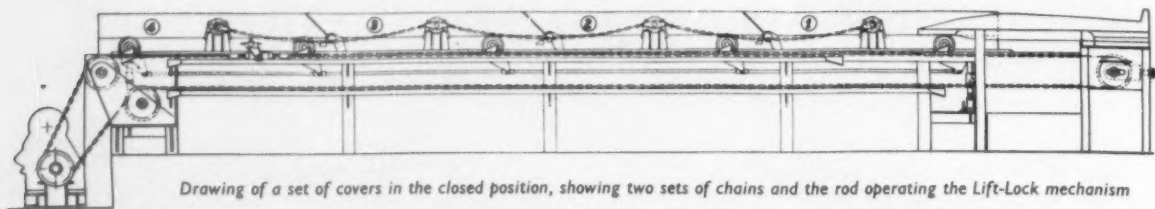
out manual action other than the pressing of the necessary buttons.

The Magronest cover was demonstrated recently at Bouzonville, a small French town in Lorraine, where a factory is now engaged in the production of hatch covers for the International MacGregor Organisation, meeting its requirements for ships building in France, Holland and Germany. The new cover has been ordered for a total of eight bulk carriers of 21,000 dwt building in France. It is also likely to be used in a new bulk carrier which is being planned by a British firm. One feature of the Magronest cover, the system of locks that replaces the transverse cleats, has not yet received the approval of the classification societies. For this reason conditional approval has been given by the Ministry of Transport for its use in this one British ship.

The design features of the Magronest cover can be seen by reference to the accompanying illustrations. These are of the demonstration set of covers erected at Bouzonville, which is for a hatch 21ft by 29ft. The sides of the



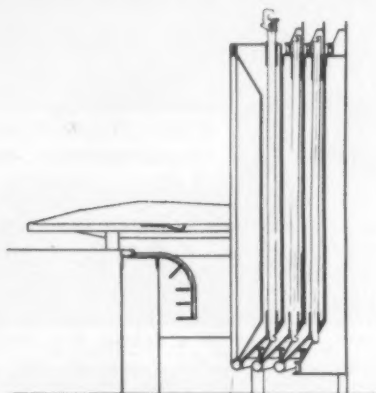
A set of Magronest covers in the closed position



Drawing of a set of covers in the closed position, showing two sets of chains and the rod operating the Lift-Lock mechanism

individual sections are sloped, so as to allow them to nest, but the upper surfaces are free of cleats. Thus when the hatch is closed the centre portion of the covers is flat without any projections, but the sides slope downwards. The cover sections run on four or two wheels as shown, and when rotating to the vertical position for nesting it pivots about a further pair of wheels which run on the usual ramp at one end of the hatch. Because of the sloping sides of the cover, these wheels are carried on welded brackets projecting outwards and upwards. These brackets are not on the transverse centre-

projecting lug, and this engages with a corresponding lug hung on the hatch cover axle, and secures the cover in position. When the covers are opened and cargo is being worked, the Lift-Lock levers should be lowered to prevent any chance of their upper ends being damaged through being struck by swinging cargo. They must of course be raised again before the covers are closed, and an interlock is at present under development which will make it impossible for this step to be omitted from the closing sequence.



Section through a set of covers in the nested position. The leading end of the first cover and the trailing end of the last cover are the only rectangular ones, other ends being angled to give close stowage. The cleating rods passing through all the covers can be seen

line of the cover, but towards one side. This feature means that lower hatch coamings can be used, as with the single-pull cover the coamings have to be a little higher than the classification societies' requirements in order to allow the covers to pivot.

The covers are opened and closed by means of endless chains running round wheels at either end of the hatch, and driven by an electric or hydraulic motor. The chains are secured to the leading section by means of lugs projecting from the section. In addition there are the usual chains between the ramp wheels which pull the covers from the vertical position on closing.

"Lift-Lock" Mechanism

To secure the hatch covers for sea, use is made of the "Lift-Lock" mechanism already mentioned. This consists of a series of pivoted levers, one for each travelling wheel, linked by hydraulically operated rods running the length of the hatch coaming and outside it to port and starboard. The track on which the wheels run is slotted at the points where they rest when the covers are closed, and the slots are filled by lugs projecting from these levers. When the levers move the lugs are lowered, and with them the covers, until the covers bed on their watertight seals. Higher on each lever is a second



Section through the joint between the last two covers, showing the automatic cleating and also the position of the watertight seal. The arrow indicates the direction in which the cleating rod moves to lock the covers, the method used here being different from the other joints

The automatic system for transverse cleating of the covers can best be understood by an examination of the line drawings. Each cover has two steel rods running through it, and as a cover falls into the horizontal position its rods engage with those of the next cover ahead. In the leading cover, the ends of the rods project ahead of the cover, and in the last inch or so of closing they strike two stops on pillars at the end of the hatch coaming and are forced backwards. As all the rods are interconnected, each is forced back until the point of engagement is contained within the sleeve-type guide, and so locked. At the same time a hook on each of the leading pair of rods engages with the stop, and serves to disengage the rods again when the covers are opened.

New Sealing Strip

For watertight seals, use is made in the Magronest cover of another new MacGregor development which has been given the name "Magrotite." The normal solid rubber strip used for sealing inevitably acquires in time a small amount of permanent set, and then has to be replaced. In the Magrotite seal the rubber is of hollow section, and the design is such that the necessary movement of the seal takes place with the minimum of distortion, and therefore with no permanent set. It has been tested for five and four years, respectively, in two French ships without replacement being needed.

The factory at Bouzonville where MacGregor hatch-covers are being made is an attractive new building, where work is being carried out to high standards. It is owned by Constructions Mécaniques de Bouzonville, and is under contract to the International MacGregor Organisation. The area is one which until recently was shunned by industrialists on account of its nearness to the German border. Its advantages are a good supply of willing though untrained labour, nearness to steel supplies, and a central position for supplying shipyards round the coast of Europe. Most hatch covers are dispatched by rail, though some of particularly large size are sent by road.

NEW ANTI-CORROSION PRIMER

A NEW technique for protecting steel against corrosion has been used for the first time in shipbuilding in the tanker *Ondina*, 48,000 dwt, under construction at the Rotterdam Drydock Company's yard for Shell Tankers N.V. The protection, which is expected to last up to two years, consists of two coats of Shell Epikote resin primer having a high percentage of zinc dust as pigment. Each coat is no more than 10 microns (about 1/2,500th of an inch) thick. The primer, "Galvafroid" E.V., was supplied by Nederlandse Verf-en Lakfabriek, Amsterdam, who are the Dutch associates of the U.K. concern Expandite.

The first coat of primer is applied to the bare steel plates and profiles, which have been shotblasted to remove the scale left by the rolling mills, before construction begins. The second is applied after the parts have been assembled, as construction progresses. On the *Ondina* the area of steel protected was about 220,000 square metres. It has been found that plates coated with Epikote resin-based zinc-rich primer are very much more pleasant and easy to handle and that coated plates can be cut or welded without the production of unpleasant fumes and without affecting the strength of the welds.

Epikote resin-based zinc-rich primers possess advantages of great value to the shipbuilding industry; they can be applied to ship's plate directly after shotblasting and then provide a tough corrosion resistant coating which is capable of withstanding the subsequent handling and forming operations. They dry very rapidly and it has been found that after a drying time of about three minutes (at 22 deg C) the plates can be passed through a set of straightening rollers without damage to the coating. Normal practice is to cut and assemble the plates, patch prime the welds and cut edges and then apply a second coat of primer over the whole surface to give a total film thickness of approximately 20 microns. The primed steel is then completely protected from the weather and the completed ship will not require further treatment for rust removal before the finishing paint is applied.

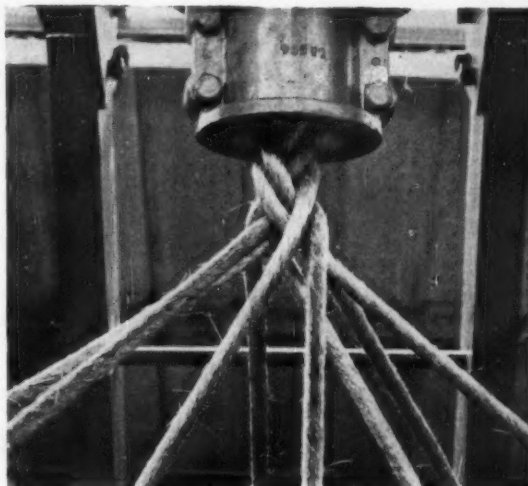
ODENSE EXTENSION AT LINDO

(Continued from page 572)

to allow the cranes to serve the storage space outside the assembly shops, while transverse rails enable any or all of the cranes to be moved anywhere. This is important both for lifting very heavy weights in the fitting-out basin and because the demand for cranes is always changing during the period of building.

The building containing the fitting-out workshops measures 40m by 222m, the individual workshops lying parallel to each other, with materials passing along U-shaped routes and entering and leaving the workshops through gates facing the fitting-out basin. This system has been adopted in order to limit the breadth of the whole plant.

Right from the start of Odense Staalskibsværft Mr A. P. Moller has been helping his workers and employees to get homes of their own, and up to the last war more than 400 houses had been built for and purchased by members of the staff. Rising prices have made this system impracticable, and since then some 450 flats have been built and leased to workers. To continue this plan a separate housing company, Ejendomsselskabet Lindo A/S, was set up in 1957. A number of farms outside the village of Munkebo were acquired, and in 1958-59 the first 150 houses in the new "town" went up. Last year 350 homes were added, and today the new village holds some 900 homes with about 2,500 inhabitants. The village is laid out in a very modern way, with relatively few carriage-ways, but garden walks leading from all quarters to a shopping centre. A large primary school has been set up, and later a cinema, a village hall, and other communal institutions will be added. The village consists mostly of detached and semi-detached houses, but there are also a number of larger buildings with flats.



"SQUARELINE" BRAIDED ROPE

FOR MANY YEARS eight-strand braided rope has been made for special purposes, but although regarded as being superior to three-strand laid rope it has never been considered for marine use because of the apparent difficulty of splicing. During the last few years braiding machinery of a very old type has been converted to produce a simpler construction of rope which is relatively easy to splice. Experiments have proved this rope to be so efficient that a world-wide demand has arisen, and in turn this has created a demand for modern machinery capable of producing braided or plaited rope. James Mackie & Sons, of Belfast, have designed one which overcomes the technical problems involved. The principal difficulty to be overcome was that of retaining the correct amount of twist in the strand during the process of making these strands into a rope. The method used to retain this twist is simple, but in turn has meant that other modifications have had to be introduced, without interfering with the main principle of the machine. The designers have been so successful that already orders have been received from Europe, America and the Far East. British Ropes Ltd have taken delivery of the first two machines to be made and are now producing the rope, known as "Squareline," in circumferences from 6in to 10in. British Ropes Ltd will shortly be taking delivery of a further machine which will make the plaited rope in sizes from 3in to 6in.



NEW CONTRACTS

| Shipowners | No. of Ships | Type | Tons d.w. (gross) | Dimensions (ft.) L.b.p.(o.a.) x B x D.(dft.) | Delivery | Speed (knots) | Propelling Machinery | Total h.p. | Engine Builders | Shipbuilders |
|---|--------------|-----------------------|-------------------|---|----------|---------------|----------------------------|--------------|--------------------|--------------------------------------|
| Yards in Great Britain and Northern Ireland | | | | | | | | | | |
| Canadian Pacific Steamships | 1 | Cargo liner | 6,000 | — | 1962 | — | Diesel | — | — | Burnisland S.B. |
| Bristol Pilotage Authy. | 1 | Pilot vessel | — | (57.75) x 15.42 x (4.25) | — | 14 | Tw.-scr. diesel | 460 | Rolls-Royce | John I. Thornycroft & Co |
| Overseas Yards | | | | | | | | | | |
| Jayanti Shipping Co, India | 4 | Bulk carriers | 30,500 | — | — | — | Geared turbine | — | Shipbuilders | Mitsubishi S.B. & E. Co. |
| S.A. Gagocean | 1 | Gas carrier | — | — | — | — | Diesel | — | — | — |
| S.A.G.A. | 1 | Liquified gas carrier | — | — | — | — | Diesel | — | — | Ch. Dubigeon |
| Soc. Navale Caennaise | 1 | Refrig. cargo Tanker | — | — | — | — | Diesel | — | — | — |
| W. Neumanns Rederi, Bergen | 1 | Tanker | 5,000 | — | 1963 | — | Sulzer diesel | 3,750 | Marines Hovedverft | Moss Vaerft |
| Sig. Bergesen, Stavanger | *2 | Tankers | 80,000 | — | 1963 | 12 | Diesel 12 cyl B & W diesel | 1,500 25,000 | Shipbuilders | A.B. Lodose Varf Ch. de l'Atlantique |

* Change of size from 58,240 dwt

LAUNCHES

| Date | Shipowners | Ship's Name and/or Yard No. | Type | Tons d.w. (gross) | Dimensions (ft.) L.b.p.(o.a.) x B x D.(dft.) | Speed (knots) | Propelling Machinery | Total h.p. | Engine Builders | Shipbuilders |
|---|------------------------------------|-----------------------------|--------------------|-------------------|---|---------------|----------------------|------------|--------------------------|----------------------------------|
| Yards in Great Britain and Northern Ireland | | | | | | | | | | |
| June 12 | Metcalfe Motor Coasters | Anne M (399) | Coaster | 1,620 (1,300) | 218 x 36 x 15 (14.5) | — | Two 8 cyl diesels | 1,320 | Lister Blackstone | Burnisland S.B. Co |
| June 14 | John Holt Westminster Dredging Co | J.H.W.D. Enterprise (1159) | Suction dredger | (1,000) | 184 x 46 x 13.5 | — | NIL | — | — | Simons Lobnitz |
| June 15 | Boyd Line, Hull | Arctic Vandal (968) | Trawler | (600) | (180) x 30 x 16.25 | — | 8-cyl diesel | 1,400 | Mirrlees Bickerton & Day | Cook Welton & Gemmell |
| June 15 | Devanha Fishing Co | Carency | Trawler | (214) | (116) x 23 x 12 | — | 6 cyl diesel | 675 | Crossley Bros | John Lewis & Sons |
| June 27 | Shaw Savill & Albion Co | Northern Star | Pass. | (22,000) | 595 (650) x 82 x 46.25 (26) | 19.5 | Geared turbine | 22,000 | — | Vickers-Armstrongs, Walker |
| Overseas Yards | | | | | | | | | | |
| May 31 | Polish Ocean Lines | Norwid | Cargo | 8,400 | 429.67 (457.95) x 62.25 x 37.67 (24.58) | 16.8 (T) | Sulzer diesel | 7,200 | Ch. de l'Atlantique | Ch. Reunis Loire Normandie |
| May 31 | Govt. of Indonesia | Talando (145003) | Cargo | 2,300 (2,760) | 282.2 (315.25) x 26.95 (14.5) | 12 | 6 cyl diesel | 1,800 | Sulzer Bros | Stoczna Szczecinska |
| June — | Cia. Trasmediterranea | Ciudad de Bilbao | Cargo pass. Tanker | 7,000 | 400 x 56.2 x (24) | 17 | Diesel | 7,500 | Burmeister & Wain | Union Navale de Levante |
| June — | Denizcilik Bankasi T.A.O. | Kaptan Am Alniakz (778) | Tanker | 21,000 (13,300) | 551 x 72.1 x 40.25 | 16 | Sulzer diesel | 9,000 | Shipbuilders | Uruga Dock |
| June 3 | Cia Armonia de Navegacion | Armonia (1348) | Cargo | 13,700 (9,400) | 438.5 (463) x 61 x 40.5 (27) | 14.25 | Sulzer diesel | 5,400 | Shipbuilders | Forges et Ch. de la Mediterranee |
| June 7 | Ove Skou | Mads Skou (350) | Cargo | 7,000 | 382.25 x 56.42 x 25.95 (24) | 17 | B & W diesel | 6,550 | Shipbuilders | Elsinore S.B. Co |
| June 8 | A/S Det Danske-Franske D/S | Gronland (623) | Refrig. cargo | 4,200 (3,400) | 301.67 x 48 x 26.58 (22.58) | 14 | B & W diesel | 3,450 | Fr. Krupp | Werft Nobiskrug |
| June 12 | Cargo Ships El-Yam | Har Gilead (773) | Refrig. cargo | 5,500 (6,700) | — | — | Diesel | — | M.A.N. | Deutsche Werft |
| June 13 | Aretusa S.p. A. di Nav. (A. Laura) | Edera (1575) | Bulk carrier | 32,800 (24,400) | 636.5 x 92 x 51.42 (34.25) | 17 | Fiat diesel | 16,800 | Shipbuilders | Ansaldo S.A., Genoa |

TRIAL TRIPS

| Date | Shipowners | Ship's Name and/or Yard No. | Type | Tons d.w. (gross) | Dimensions (ft.) L.b.p.(o.a.) x B x D.(dft.) | Speed (knots) | Propelling Machinery | Total h.p. | Engine Builders | Shipbuilders |
|---|----------------------------------|--------------------------------|-----------------|-------------------|---|---------------|-------------------------|------------|-------------------|------------------------------------|
| Yards in Great Britain and Northern Ireland | | | | | | | | | | |
| May 6 | Foundation Maritime | Foundation Vibert (132) | Tug | (236) | (96.25) x 29.25 x (13) | — | Tw.-scr. diesel | — | Fairbanks Morse | P. K. Harris & Sons |
| May 8 | Forward Motor Trawlers | Forward Grace (4) | Trawler | 84 (213) | (106.1) x 24.33 | — | 6-cyl diesel | — | National | A. J. Mitchell & Co |
| May 9 | Bulk Oil S.S. Co | Pass of Melfort (379) | Coastal tanker | 1,250 (937) | (211.25) x 33.58 x (14.33) | — | 4-cyl Polar diesel | 1,050 | Nohab | Blyth Dry Docks |
| May 10 | John Harker | Kerrydale H (293) | Tank barge | 380 (270) | (140.25) x 22 x (8.25) | — | 4-cyl diesel | — | Ruston & Hornsby | John Harker |
| May 12 | Pacific S.N. Co | Coloso (896) | Tug | (176) | (101) x 26.1 | — | 8-cyl diesel | — | Ruston & Hornsby | Hall Russell & Co |
| May 25 | Small & Co (Lowestoft) | Suffolk Punch (461) | Trawler | (202) | (106.5) x 23.33 x (9.33) | — | 6 cyl diesel | — | Ruston & Hornsby | Richards Ironworks |
| May 31 | Lowestoft owners | Bryher (279) | Trawler | 70 (140) | (108.75) x 22.25 x 11.25 | — | 5-cyl diesel | 500 | A.K. Diesels | Brooke Marine |
| June — | Crown Agents for Port of Bahrain | { M.L.I. } Mooring launches | — | — | 24.25 x 8 x 4 | 7.5 | 4-cyl diesel | 104 | Ruston & Hornsby | Thomas Launch Works |
| June — | Grangemouth & Forth Towing Co | { M.L.2 } Zealand (528) | Tug | (100) | 75 x 23.5 x 12.25 | — | B & W diesel | 840 | — | Grangemouth Dockyard |
| June 21 | Charente S.S. Co | Tactician (845) | Cargo | 10,900 (8,850) | (488.2) x 62 x 38.75 (29.2) | 16 | 6-cyl diesel | 8,000 | Shipbuilders | Wm. Doxford & Sons |
| Overseas Yards | | | | | | | | | | |
| May — | Sameiet Troms | *Troms (44) | Tanker | 34,000 (20,000) | 650 (665) x 86 x 46.58 (35) | 16.9 | 9-cyl B & W diesel | 15,000 | Shipbuilders | Akers M.V. |
| May — | Leif Hoegh & Co A/S | Hoegh Berim (48) | Cargo | 8,200 (5,500) | 371.1 (405.2) x 55.5 x 32.1 (26.25) | 15 | 6-cyl diesel | 4,100 | Sulzer Bros | Drammen Slip |
| May — | Mosvold Shipping Co | Moscliff (1531) | Tanker | 50,000 (32,000) | 735.58 x 100 x 52.9 (39.42) | 17 | Geared turbine | 17,600 | Shipbuilders | Mitsubishi S.B. & E. Co, Nagasaki |
| May — | Silja Rederiet | Skandia (369) | Car/pass. ferry | (3,750) | 303.25 (333.33) x 60.67 x 23 (13.75) | 18 | Two 9-cyl Sulzer diesel | 6,600 | Shipbuilders | Wartsila-Koncernen A.B. Sandvikens |
| May 15 | Allseas Shipping Co, Israel | Nurith (1346) | Cargo | 13,700 (9,400) | 438.5 (463) x 61 x 40.5 (27) | 14.25 (T) | 6-cyl Sulzer diesel | 4,100 | Shipbuilders | Forges et Ch. de la Mediterranee |
| June — | Heron Inc (Niarcho group) | World Hope (1601) | Tanker | 24,500 (16,270) | 580 x 76.5 x 42.58 (27) | 15.6 (T) | Stork diesel | 8,400 | N.D.S.M. | Hellenic Shipyards |
| June — | Canadian Pacific Steamships | Beaverfir (32) | Cargo | 5,150 (4,500) | 344.5 (373.67) x 50.5 x 32.1 (22.75) | 14.5 | 6-cyl diesel | 3,000 | Burmeister & Wain | Sarpsborgs M.V. |
| June — | Zim Israel Nav. Co | Timna (769) | Bulk carrier | 23,000 (15,000) | 519.95 x 74 x 48.25 (34.5) | 15 | 8-cyl diesel | 9,000 | M.A.N. | Deutsche Werft |

* Hull built by Stord Vaerft

MARITIME NEWS IN BRIEF

MR J. E. CHURCH, former chief technical adviser and principal superintendent of the South American Saint Line Ltd, Cardiff, has been appointed chief superintendent of Sir R. Ropner & Co (Management) Ltd, Darlington. Mr Church joined the B & S Shipping Co Ltd (subsequently South American Saint Line Ltd) in April 1939. He was originally superintendent engineer of that company, but in 1947 was promoted to the post of principal superintendent.

CAPTAIN W. T. C. LETHBRIDGE of P & O-Orient Lines has retired from seagoing service. His last command was the liner *Arcadia*. Capt Lethbridge was a Worcester cadet and served his apprenticeship with P & O. He entered the company's service in 1924 as Fourth Officer of *Morea*. He attained the rank of third officer in 1926, and was appointed second officer in 1933. In 1938 he was appointed troop officer on board *Ettrick*. He was appointed staff captain in *Strathmore* in 1950 and his first post as master was in 1951, when he joined the cargo ship *Coromandel*. After that he commanded the *Empire Fowey*, *Carthage* and *Strathaird*. He was appointed captain of *Arcadia* in 1960.

MR R. F. WILLIAMS, manager of the Pacific Steam Navigation Company, has been appointed general manager, Western Area, for Royal Mail Lines Ltd and the Pacific Steam Navigation Company. He will retain his position as manager of the latter company. Mr A. F. Howard, manager for Central America for P.S.N., and Mr A. E. West, manager of the Caribbean area for Royal Mail Lines, are both retiring shortly, and their duties will be taken over by Mr Williams on behalf of both companies.

CAPTAIN J. E. SISSMORE, personnel manager for 13 years with Vickers Armstrongs (Shipbuilders) Ltd, Walker-on-Tyne, is retiring at the end of June.

THE DEATH has occurred of Mr A. G. S. Chapman, director of Chapman & Willan (London) Ltd.

MR C. W. PETERS will be retiring from the board of the United Baltic Corporation at the end of June. Mr P. B. Larsen of MacAndrews & Co Ltd, has been elected in his place.

DR W. T. ALEXANDER, Dean of the College of Engineering at Northeastern University, has been named Administrator of the Webb Institute of Naval Architecture, Glen Cove, Long Island, N.Y.



HOULDER LINE APPOINTMENTS

Following the retirement of Mr Walter C. Warwick as chairman of Houlder Line Ltd, Mr John Houlder will replace him as chairman. Mr W. C. Warwick has accepted an appointment as president. **MR C. W. WARWICK** (left) has been appointed deputy chairman and **MR D. A. EATON** (right) a director. Mr C. W. Warwick is deputy chairman of Houlder Brothers and many of the associated companies, chairman of the Baltic Exchange. Mr Eaton became assistant superintendent with Houlder Brothers in April 1957. He was appointed chief superintendent later that year.

MR W. DONALD COWIE, previously chief officer on the Ben Line vessel *Benlomond*, has been promoted captain, and is now master of the *Benarty*, one of the Ben Line's four heavy-lift ships.

MR E. J. K. GOLDSMITH, Hudson Steamship Co Ltd, has been elected chairman, and Mr D. K. Buik, Canadian Pacific Steamships Ltd, deputy chairman, of the London General Shipowners' Society.

MR A. WATSON, superintendent engineer of Kaye Son & Co Ltd since 1935 is to retire. Mr John Mort, at present assistant superintendent engineer, is appointed superintendent engineer.

THE DEATH has occurred of Mr C. Guthrie-Guthrie, a director of M.E.P. Co Ltd.

MR T. W. D. ABELL has been appointed managing director of William Doxford & Sons (Engineers) Ltd and a director of the Doxford & Sunderland Shipbuilding & Engineering Co Ltd. Mr Abell has been managing director of David Rowan & Co Ltd for the last five years. He went to Canada in 1947 to take up the position of assistant general manager to Canadian Vickers Ltd and later became vice-president of their main division. He left that position to join David Rowan. He is a member of the Royal Institute of Naval Architects and of the Institute of Marine Engineers.



THE DEATH has occurred of Mr R. P. Harrison, head of the firm of W. B. Harrison, ships' stores, of Sunderland.

MR N. L. HOWELL has been appointed to the board of the D.P. Battery Co Ltd, of Bakewell, Derbyshire.

THE DEATH has occurred of Mr R. C. Mackie, manager and director of the North of Scotland, Orkney & Shetland Shipping Co Ltd.

THE DEATH has occurred of Mr F. Bullivant, director in charge of the northern offices of Benjn. Ackerley & Son Ltd.

THE NEW CAR FERRY for the New Zealand Government Railways being built by Wm. Denny & Brothers Ltd, Dumbarton, will be named *Aramoana*, a Maori name interpreted as "seapath" or "a road over the sea."

FIGURES just released by the British Travel & Holidays Association show that more than 122,260 overseas visitors arrived in Britain in April, bringing the total for the first four months of 1961 to 349,000—17 per cent more than in the same period last year. Countries recording the largest percentage increases in the first four months of the year were the U.S.S.R. 113; Belgium 29; Denmark 21; Finland and Portugal 20; Germany 16; Italy and Spain 15; France and Switzerland 14; and Austria and Sweden 11. U.S. visitors in April numbered 28,680, which brought the total for the first four months of the year to 67,800—an increase of 10 per cent. Visitors from Central and South America increased by 30 per cent to 6,400.

INCHCAPE & CO LTD are to extend and consolidate the company's interests in Australia by acquiring the whole of the issued share capital of Macdonald Hamilton & Co Pty Ltd. The interests of Macdonald Hamilton will be amalgamated in due course with those of the Australasian United Steam Navigation Co Ltd, which is now a wholly-owned subsidiary of Inchcape & Co Ltd.

FIGURES issued by the Central Bureau of Statistics, Oslo, show that 56 Norwegian vessels of 478,000 grt were laid up as at May 31. Of these 18 were drycargo vessels of 64,000



STEEL HOUSE, PINNER

Steel & Co Ltd have recently moved to Steel House, Eastcote, Pinner, Middlesex, quite close to London Airport. Steel group companies at the new premises are Steel & Co Ltd, Steels Engineering Products Ltd, Steels Engineering Installations Ltd, Steels Process Plant Ltd, Archibald Low & Sons Ltd, R. H. Neal & Co Ltd, Pelapone Ltd, F. Taylor & Sons (Manchester) Ltd, and the British Crane Co Ltd

tons and 38 were tankers of 414,000 tons. Since the end of April the number of laid-up dry-cargo vessels went down by 13 of 30,000 tons. The number of laid-up tankers increased by 6 of 79,000 tons.

EXTRA PASSENGER AND VEHICLE capacity on the Transport Ferry Service's Preston-Northern Ireland "drive-on" shipping routes has been introduced. The ferry *Bardic Ferry* will join her sister ship, *Ionic Ferry*, on the routes between Preston and Larne and Preston and Belfast. With a converted tank landing ship, the *Empire Nordic*, they will provide capacity for 60,000 commercial vehicles and cars a year.

A NEW CARGO SERVICE is being established direct between Seattle and the new Port of Anchorage terminal facility by Northland Freight Lines. Frequent regular sailings are scheduled during the month of June and coming months.

THE Dieppe Lifeboat Committee has been presented with a Pye International marine radiotelephone by French National Railways. This is the first French lifeboat to be equipped with VHF radio.

* * * *

THERE WERE 945 vessels of 1,000 grt and over in the active oceangoing U.S. merchant fleet on May 1, five less than the number on April 1. There were 43 Government-owned and 902 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive, or Government-owned vessels employed in loading grain for storage. They also exclude 24 vessels in the custody of the Departments of Defense, State, and Interior, and the Panama Canal Company.

MEMBER lines of the Far Eastern Freight Conference, Japan Outward Freight Conference, and Philippines/Europe Conference have announced an increase, generally of 10 per cent, in their rates of freight from ports on the Continent of Europe and in the United Kingdom to all conference destinations, effective September 1.

ARMEMENT DEPPE of Belgium have moved to Meir, 11, Antwerp.

IN VIEW of the recent publicity given to the anticipated sale of the liner *Media* and her subsequent withdrawal from the Liverpool-New York service, the Cunard Line has announced its intention to continue to operate a weekly service between Merseyside and New York for the benefit of cargo shippers. Should both the *Media* and her sister ship *Parthia*, which also operates in the Liverpool-New York service, be disposed of, they will be replaced immediately by two fast modern cargo liners.

THE FAIRFIELD SHIPBUILDING & ENGINEERING CO LTD and David Rowan & Co Ltd, both members of the Lithgow Group of companies, have decided to rationalise a number of their activities in order to improve their competitive position especially in the marine engineering field. Facilities already exist between these two firms which allow them to make the fullest use of certain special machine tools in their separate establishments and the new arrangement is intended to extend this policy.

COAL SHIPMENTS from the port of Blyth in May amounted to 533,134 tons compared with 464,416 tons in May 1960, an increase of 68,718 tons. For the five months to the end of May shipments were 2,976,129 tons, an increase of 450,975 tons on the corresponding period of last year. Foreign exports to the end of May were 317,826 tons compared with 295,437 tons in the first five months of last year.

* * * *

BRITISH UNITED AIRWAYS and the Southern Region of British Railways have reached agreement on the construction of a new air terminal at Victoria Railway Station, London. The new terminal will be erected over the railway platforms. This plan was evolved with the full support of British Railways. No main line station is better served by public transport than Victoria, and the construction of an air terminal over the platforms there will complement the rail-air facility at Gatwick, where there is a railway station in the airport. It is hoped to have the new Victoria air terminal in use by the summer of 1962.

RESCUES FROM SHIPWRECK by H.M. Coastguard during the year ended March 31 numbered 39—four persons by breeches buoy and 35 by means of lines. In the previous year there were 105 such rescues. Life-Saving Apparatus Companies were called out on 177 occasions, 69 fewer than in 1959-60. Of these calls, 74 were to vessels in distress. Lifesaving action was taken on 850 occasions by the Coastguard. Most of the incidents concerned ships, of which 590 were observed or reported to be in distress and requiring assistance.

FIFTY YEARS AGO

From THE SHIPPING WORLD of 28 June 1911

Much has happened during the past week in connection with the seamen's strike, so far as Glasgow is concerned. At the end of the previous week the liners in the North Atlantic trade were going away all right after a good deal of delay, but last week the shipowners did not even attempt to secure men at the old rates of wages. The Allan Line were the first to take the initiative, as they had their steamer *Parisian* due to sail on Friday for Boston, and the position in which they were placed was a very awkward one. They adopted what was the easiest way out of the difficulty by raising the rates of pay all round and by acceding to the men's demands for a recognition of the Union. Seamen and firemen got an advance of £1 per month, making their wages £5 per month, and cooks, stewards, and other workers received proportionate advances. These concessions made it very difficult for the other firms in the North Atlantic trade—the Anchor and Donaldson Lines—to refuse to make similar concessions. The Anchor Line held out as long as they possibly could, the last point they conceded being the recognition of the Seamen's and Firemen's Union.

The British Navy's contribution to the great fleet in the Coronation Review was 167 vessels, including eight *Dreadnoughts*, among them being the original of the class, four *Dreadnought* cruisers, 21 armoured cruisers, nine protected cruisers, 72 destroyers, 12 depot ships for destroyers, 12 coastal torpedo boats, and eight submarines, the last-named little craft being the last to take up their positions in the line, having come into harbour only in the morning. Brazil was the one country in the world with a modern fleet unrepresented at Spithead.

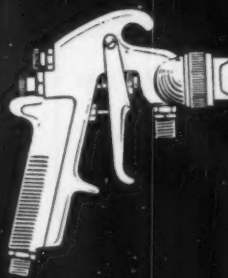
Why allow shotblasted steel to rust?

protect immediately with

METAGARD

which meets all essential requirements

• • • • •



- Up to 12 months protection.
- Quick drying.
- Compatible with all types of paints on all sections of a ship.
- Resistant to abrasion.
- No toxic fumes.
- Assists welding efficiency.
- Does not have to be removed before painting.

and recleaning costs are fractional.



ALL SHIPOWNERS

There is no longer any need to paint over rust.



TANKER OWNERS

This means greatly reduced costs for Tank Coating.

EPIGRIP

or tanks and exterior weatherwork surfaces

LEIGH'S MARINE PAINTS

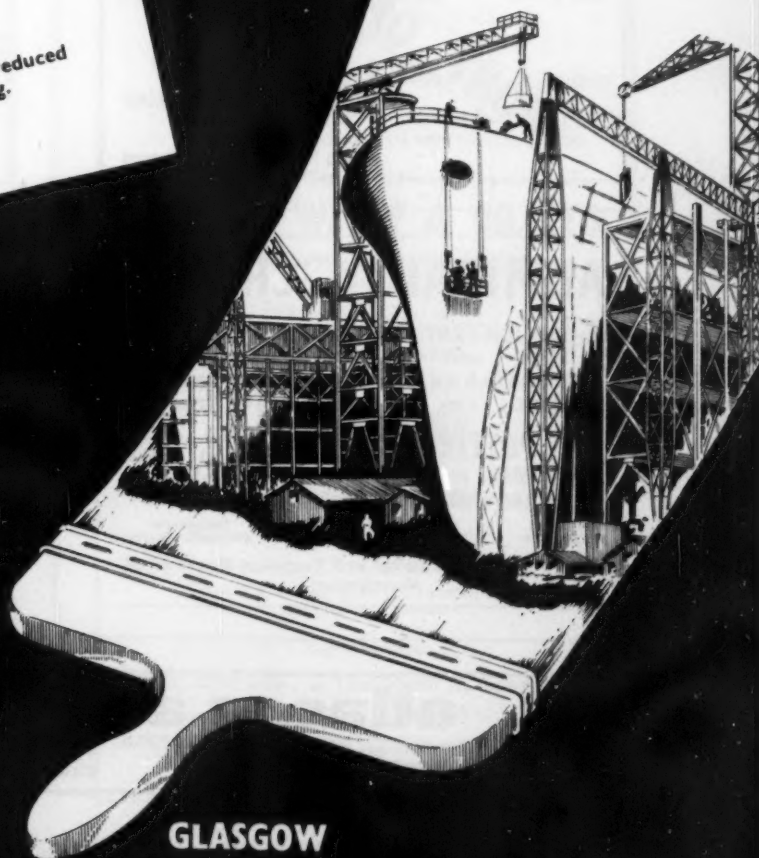
for conventional painting of top quality

W & J LEIGH LTD

LONDON • BOLTON

GLASGOW

SPECIALISTS IN THE MANUFACTURE OF MARINE PAINTS



M. DIZENGOFF & CO. LTD.

SHIPPING & PROTECTING AGENTS

Cables: Diship

(Oldest and largest ships' Agency in Israel)

Haifa, P.O.B. 300

Eilat, P.O.B. 11

Tel-Aviv, P.O.B. 1693

SHIP REPAIRS — MONTREAL

ENGINE, BOILER AND HULL

J. & R. WEIR LIMITED

Established 1875

Un 6-5401

Nights & Holidays

Un 6-5138 & RE 8-9782

33 NAZARETH STREET
MONTREALCables:
"Weirmon"
MontrealEfficiently equipped for
timber, wood pulp
and all
cargoes**PORT OF PRESTON**Quick
Despatch

Bunkering Facilities

Write: H. J. Hanna,
General Traffic Manager, Preston**HOULDER BROTHERS & CO. LTD.**Shipowners, Insurance Brokers, Passenger &
General Forwarding Agents (Sea and Air)**REGULAR FAST SERVICES to
RIVER PLATE**From Liverpool, London, Bristol Channel & Antwerp
and to SOUTH AFRICA

Head Office: 53 LEADENHALL STREET, LONDON, E.C.3

REGULAR CARGO SERVICES

Between LONDON and
HAMBURG **TERNEUZEN** **DIEPPE**
BREMEN **GHEENT** **HAYRE**
HARLINGEN **DUNKIRK** **CHARENTE**
AMSTERDAM **CALAIS** **BORDEAUX**
ROTTERDAM **BOULOGNE** **OPORTO**
ANTWERP **TREPOIT** **MEDITERRANEAN PORTS**

Between NEWCASTLE, MIDDLESBROUGH, LONDON & SOUTHAMPTON
 and OPORTO & WEST ITALIAN & SICILIAN PORTS

Between HAMBURG, BREMEN and BRISTOL CHANNEL PORTS
 (Bristol, Cardiff, Barry, Newport, Swansea)

Between LONDON and RHINE PORTS

Between SOUTHAMPTON and ANTWERP, ROTTERDAM,
 BREMEN, HAMBURG.

Coastwise Services between LONDON and HULL

The General Steam Navigation Co., Ltd.
 "Three Quays," TOWER HILL, London, E.C.3.
 Telephone: MINcing Lane 3000

ADMIRALTY CHARTSThe LATEST EDITIONS of Charts,
Plans and Sailing Directions
published by the Hydrographic
Dept., can be obtained from**J. D. POTTER,** Admiralty Agent for Charts
LTD., Publisher of Nautical Books,
and Bookseller.

145 MINORIES, LONDON, E.C.3.

Telephone:
ROYAL 1369Telegrams:
ADCHARTS FEN LONDONCablegrams:
ADCHARTS LONDONLarge Stocks of Nautical and Technical Books of all
descriptions**KUWAIT — ARABIAN GULF****MOHAMED ABDUL RAHMAN AL-BAHAR**Well Organised — Fully Equipped
and Most Experienced in Shipping Work

OFFERS

Multi Facilities For Quick Despatch

TO

PASSENGER VESSELS — FREIGHTERS — TANKERS

AGENTS FOR

DEUTSCHE DAMPFSS.-GES. "HANSA," BREMEN
JUGOLINIJA, RIJEKA & OTHERS

ENQUIRIES INVITED

P.O. Box 148, KUWAIT

Cable: MOATASIM

atlas, s.a. Combustibles y LubrificantesAddress: { Telegrams: ATLAS
José Antonio, 1
Apartado, 141Shipping Agents
Ceuta, Spain.Telephones: { 1041
1410

SUNDSVALL-SWEDEN**Swedberg & Kronberg A.-B.**

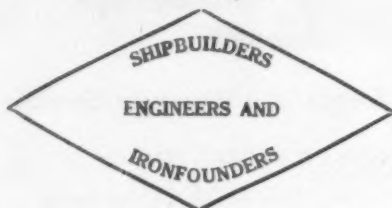
Licensed Shipbrokers

Forwarding, Average & Insurance Agents & Travel Bureau

Telegrams: "Swedkron," Sundsvall. Telex: 71013

W. J. YARWOOD & SONS LTD.

Established 1840

**THE DOCK, NORTHWICH, CHESHIRE**

Grams: "Shipyards, Northwich."

Phone: 4234 (2 lines)

MOSS HUTCHISON LINE LTD.

REGULAR FREIGHT SERVICES FROM LIVERPOOL, GLASGOW AND SOUTH WALES TO CASABLANCA AND MEDITERRANEAN PORTS. ALSO FRANCE, SPAIN AND PORTUGAL

For Freight apply to

MOSS HUTCHISON LINE LIMITED

P.O. BOX 96, MARTINS BANK BUILDING WATER STREET, LIVERPOOL, 2

GLASGOW
91, Bothwell Street, C.2MANCHESTER
196 Deansgate.LONDON
c/o THE GENERAL STEAM NAVIGATION CO. LTD
"Three Quays," Tower Hill, London, E.C.3
Tel: MIncing Lane 3000**SITUATIONS VACANT**

SECOND AND THIRD OFFICERS holding Foreign Going Certificates required for service afloat in Middle/Far East waters. British Flag. 2nd Officers with Master Certificate £1,140 and with First Mate's Certificate £1,092 per annum. 3rd Officer with First Mate's Certificate £930 and with Second Mate's Certificate £882 per annum. Period abroad twelve months. 120 days U.K. leave per annum, inclusive of Sundays at Sea and Sundays in Port. Box No. 664, Crossley & Co. Ltd., 14-18, High Holborn, London, W.C.1.

SITUATIONS WANTED

SENIOR RADIO OFFICER, 1st class certificate seeks appointment in vessel under foreign flag. Alternatively qualified to serve as Junior Engineer Officer, British or foreign. Available immediately. W. Powell, c/o 154 Victoria Road-North, Southsea, Hants.

PATENT NOTICE

THE proprietors of British Patent No. 793,493 for "MARINE CRAFT WITH TIPPING CARGO CONTAINERS INTENDED FOR BULK MATERIAL," desire to enter into negotiations with a firm or firms for the sale of the Patent or for the grant of Licences thereunder. Further particulars may be obtained from MARKS & CLERK, 57/58 LINCOLN'S INN FIELDS, LONDON, W.C.2.

FOR SALE**BRITISH MADE TOPPING LIFT WINCHES**

Surplus to fleet requirements

£154 each ex works

Immediate delivery:

HART, FENTON & CO. LTD.

17, Philpot Lane, London, E.C.3

NEW SHIPS

Requiring Stores, Provisions, Tows, etc., for any Port consult

A. E. SHEPPARD & CO., LTD.

World Wide Information Service

BEVIS MARKS HOUSE, LONDON, E.C.3.

Phone: Avenue 2671/2

Cables: Aesalports, London

INDEX TO ADVERTISERS IN THIS ISSUE

| | Page |
|--|-------------|
| Aarhus Flydedok og Maskinkompagni | A30 |
| Aksjeselskabet Trafik | A28 |
| Asiaverken, A/B | A20 |
| Atlas, S.A. | A34 |
| Bahar, Mohamed Abdul Rahman | A34 |
| Barnard & Sons Ltd. | A37 |
| Bassett-Lowke Ltd. | A32 |
| Bergens Mekaniske Verksteder, A/S | A25 |
| Bibby Bros. & Co. | A35 |
| Bilbrough & Co. Ltd., A. | A6 |
| Blundell & Crompton Ltd. | A37 |
| B.P. Trading Ltd. | A5 |
| British & Commonwealth Shipping Ltd. | A8 |
| Clarke, Chapman & Co. Ltd. | A10 |
| Collis & Sons Ltd., J. | A14 |
| Cory & Son Ltd., Wm. | A5 |
| Decca Radar Ltd. | A7 |
| Ditzengoff & Co. Ltd., M. | A34 |
| Drammen Slip & Verksted | A28 |
| Edco, A/S | A27 |
| Elsinore Shipbuilding & Engineering Co. Ltd. | A24 |
| Eriksbergs Mek. Verkstads A/B | A19 |
| French Somaliland Shipping Co. Ltd. | A4 |
| Frichs A/S | A23 |
| Furness Withy & Co. Ltd. | A35 |
| Geesin & Read | A27 |
| General Steam Navigation Co. Ltd. | A34 |
| Gotaverken A/B | A17 |
| Gothenburg, Port of | A20 |
| Hall Ltd., J. & E. | Back Cover |
| Hamasaki & Co. Ltd. | A6 |
| Harland & Wolff Ltd. | A13 |
| Hawthorn Leslie (Engineers) Ltd. | A37 |
| Hawthorn Leslie (Shipbuilders) Ltd. | A37 |
| Hellenic Shipyards Co. Ltd. | A2 |
| Helsingborgs Varfs A/B | A22 |
| Helsingborgs Hamm | A28 |
| Houlder Brothers & Co. Ltd. | A34 |
| Huolintakeskus A/B, Oy | A26 |
| Kockums Mek. Verkstads A/B | A21 |
| Lauritzens Succr., J. | A30 |
| Lavino Shipping Company | A8 |
| Leigh Ltd., W. & J. | A33 |
| Lindholms Varv. | A31 |
| McGeoch & Co. Ltd. | A32 |
| Mersey Dock and Harbour Board | A32 |
| Morie & Co. Ltd., Wm. | A8 |
| Moss Hutchinson Line Ltd. | A36 |
| Mountstuart Dry Docks Ltd. | A9 |
| Nakskov Skibsværft | A29 |
| New Zealand Shipping Co. Ltd. | A35 |
| Norden i Norrköping. Rederi A/B | A28 |
| Nynas-Petroleum A/B | A15 |
| Odense Steel Shipyard Ltd. | Front Cover |
| Oresundsvarvet A/B | A18 |
| Pleuger Unterwasserpumpen GmbH | A4 |
| Poster Ltd., J. D. | A34 |
| Port Everglades Terminal Co. Ltd. | A8 |
| Port Line Ltd. | A35 |
| Preston, Port of, Authority | A34 |
| Prince Line Ltd. | A35 |
| Pusnes Mek. Verksted A/B | A27 |
| Readhead & Sons Ltd., John | A4 |
| Shell International Petroleum Co. Ltd. | A12 |
| Sheppard & Co. Ltd., A. E. | A36 |
| Springbok-Houston (Loading Brokers) Ltd. | A35 |
| Sproston Ltd. | A6 |
| Swan, Hunter & Wigham Richardson Ltd. | A9 |
| Swedberg & Kronberg A/S | A36 |
| Telford, Grier, MacKay & Co. Ltd. | A11 |
| Trondheim Havnesen | A30 |
| Uddevalivavret A/B | A16 |
| Union Castle Line | A8 |
| Valmet Oy | A3 |
| Vasteras, Port of | A26 |
| Wartsila-Koncernen A/B | A26 |
| Websters Ltd. | A37 |
| Weir Ltd., J. & R. | A34 |
| Wilhelmsen, Wih. | A23 |
| Yarwood & Sons Ltd., W. J. | A36 |

Websters COMPOSITIONS

AND ANTI-FOULING COPPER PAINTS

Grades for every need

STOCKS available at PRINCIPAL U.K. PORTS

Sole Manufacturers

WEBSTERS LIMITED HULL

Telephones : 33868 (2 lines)

ON ADMIRALTY LIST

Tel. Add : "ENAMEL HULL"

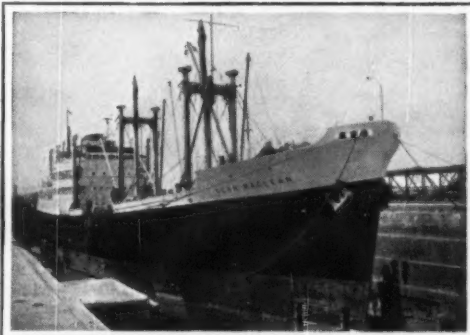
ESTABLISHED 1825

BLUNDELL & CROMPTON LIMITED

ENGINEERS : SHIP REPAIRERS
COPPERSMITHS : FOUNDERS Etc.

Telephone:
EAST 6001 & 3838 (8 lines)

Telegrams:
Blundell, 'Phone, London



Specialists in
URGENT HULL AND MACHINERY REPAIRS

Sole Manufacturers
BLUNDELL 'ATMOS' VALVES
for Pressure and Vacuum Relief
FLAME ARRESTERS, ETC.

WEST INDIA DOCK ROAD, LONDON, E.14

Branch Works: TILBURY DOCKS, ESSEX. Telephone: Tilbury 2033

STEEL CASTINGS

FROM $\frac{1}{2}$ lb. to 15 cwt. EACH

BREAKDOWN & REPAIR WORK
given IMMEDIATE special attention



LIFTING & MOORING EYES
AND OTHER BOAT
AND SHIP CASTINGS

BOLLARDS
FAIRLEADS
SHEAVES
THIMBLES
PINTLES
GOOSENECKS



BARNARD

& SONS LTD.

75, RIVER ROAD, CREEKS MOUTH, BARKING
PHONE: RIPPLEWAY 1188-9

Passenger and Cargo Vessels · Tankers

Marine Turbines and Watertube Boilers

Doxford, Sulzer and Stork Diesel Engines

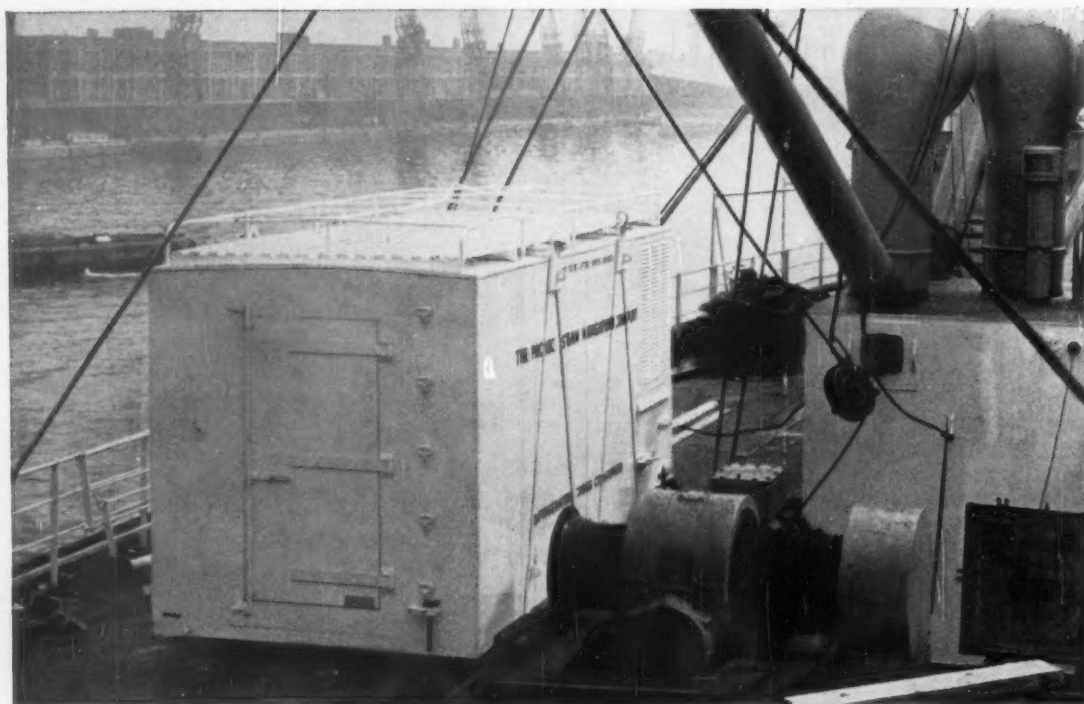
HAWTHORN LESLIE



HAWTHORN LESLIE (SHIPBUILDERS) LTD. HEBBURN-ON-TYNE
HAWTHORN LESLIE (ENGINEERS) LTD. NEWCASTLE-ON-TYNE

REFRIGERATED CARGO CONTAINERS

for Ships



J. & E. Hall Refrigerated Cargo Containers are designed to carry perishable goods in non-refrigerated ships. They are readily transportable and can be loaded on and transferred between ships whenever space permits.

- Each container is a complete unit with the refrigeration equipment housed at one end.
 - Temperatures thermostatically controllable at any setting in the -10°F to $+40^{\circ}\text{F}$ range.
 - Made to comply with the requirements of Lloyd's.
- Capacities**—From 150 to 600 cu. ft.

Illustrated brochure on request

J & E HALL LTD

REFRIGERATION, LIFT & ESCALATOR ENGINEERS
DARTFORD · KENT

Tel. Dartford 23456

A Member of the Hall-Thermotank Group

AP 338

3543

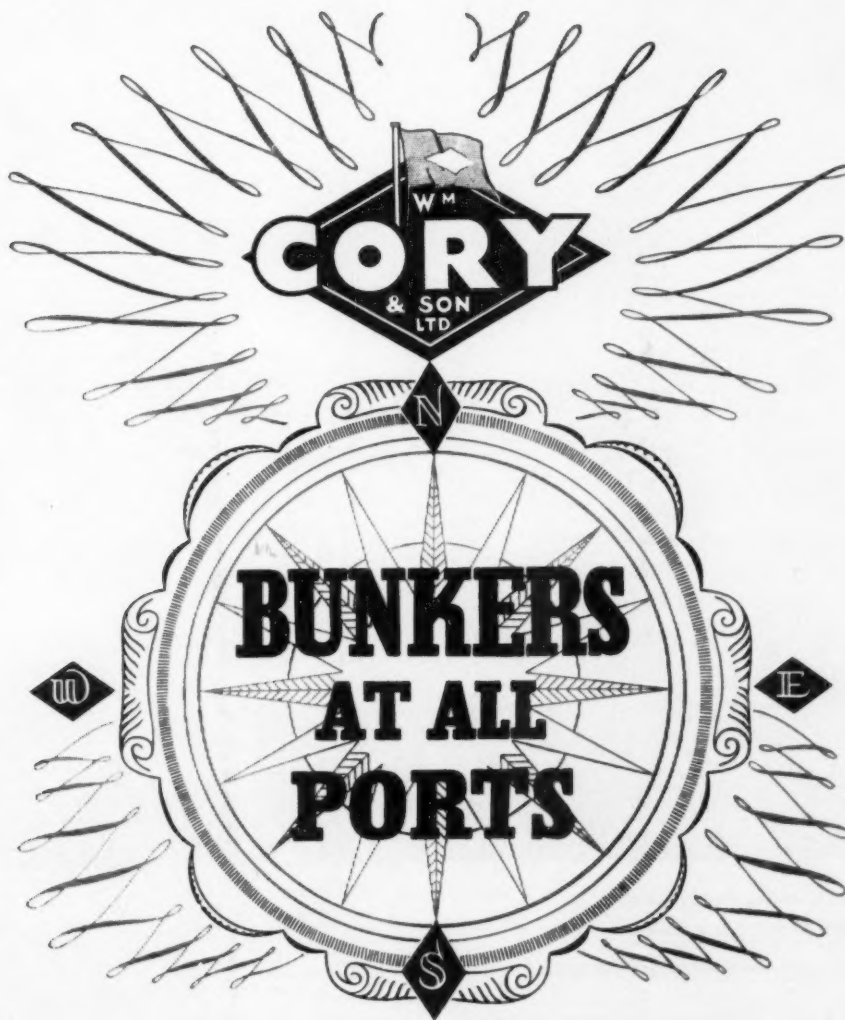
The SHIPPING WORLD



VOL. 145 No. 3543

5 JULY 1961

Price 2s.



CORY BUILDINGS • FENCHURCH ST • LONDON • EC.3